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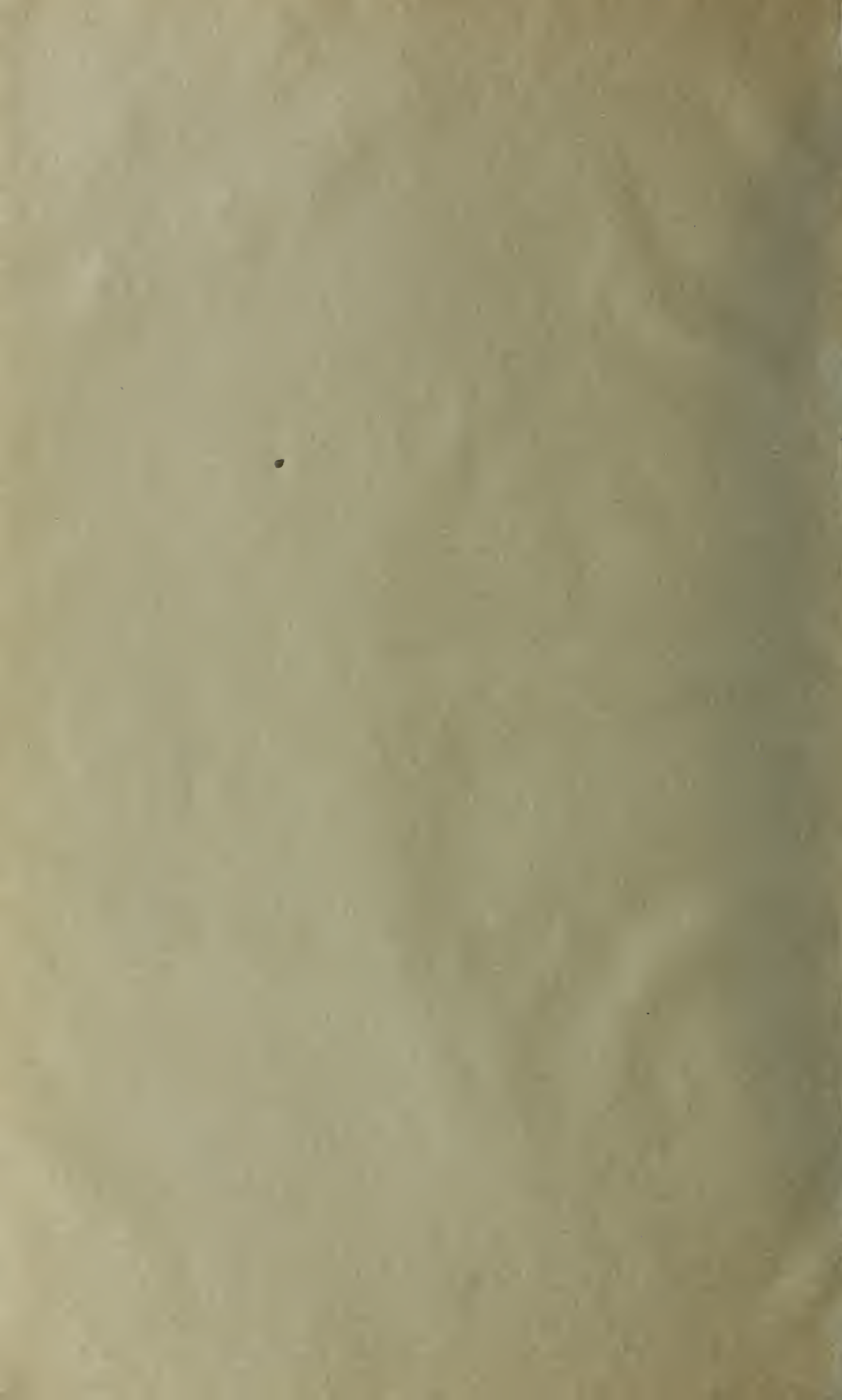
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# THE IRISH BUILDER.

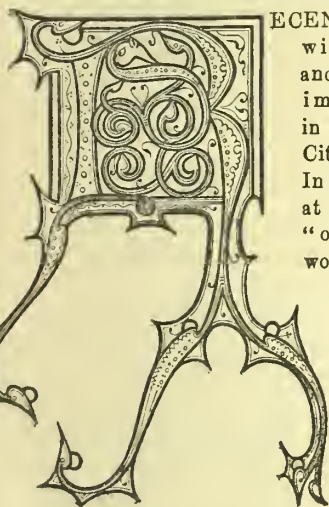
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[Vol. XLI.

DERRY, PAST AND PRESENT.  
MESSRS. HOGG AND MITCHELL'S  
FACTORY PREMISES.



RECENT years have witnessed many and much-needed improvements in the good old City of Derry. In fact, it is only at a bazaar that "old Derry" would now-a-days

he endured, and even these, perhaps, only endured with a grumble. Buildings, whose sole recommendation was

their antiquity, have been done away with, to give place to others more suited to modern requirements. Nowhere more than in those buildings devoted to trade and manufacture, have these changes taken place. Business premises of the past were marked by cramped apartments, and an air of gloom; they showed great spaces of "dead wall" unpierced, save at wide distances, by any window. Many a well-to-do merchant's shop was just a long narrow cave of darkness, down which the light filtered dim, and "skewed" through a two-sashed window-frame set with bull's-eyed glass. What is the explanation of such a state of affairs? Was it that our ancestors had not been educated sufficiently as to "Sweetness and Light," or what else was the cause? Well! there was a very sufficient cause. The Window Tax lay heavily on the land—a tax that for tyranny and caprice, for interference with the comfort and health of the people, was probably only equalled by the Salt Tax of France. It seems to us to-day almost incredible that such taxes could be either long or successfully enforced, unresisted by the common sense of nations. Yet, for centuries the Salt Tax lay on the neck of France, being only abolished in 1790; whilst that wretched Window Tax was actually in force up till 1851, or within the memory of a very great number of our readers! It is evident that there were Transvaals of the past, and Krugers too, who could have given points to "Oom Paul" in the matter of taxation.

We have improved much on these past days, and in recent years the rate of improvement has been greatly accelerated. Probably in few portions of Derry have changes for the better been

more marked than along the Strand, especially in the vicinities of Great James' and Sackville streets. We have the imposing block of buildings erected by our present worthy Mayor (J. B. Johnston, Esq.), whilst on the whole Strand frontage, between the two streets just named, quite an array of splendid shops and warehouses have replaced the straggling, ill-built irregularities of the past. But immediately behind these handsome evidences of progress and enterprise, there lay, for years uncounted, a No-Man's-Land of desolation and rubbish; a wretched and barren sore, right in the centre of the City's advance; an area of stagnation, the profitless kingdom of short leases and Corporate indecision. But the reproach is at last wiped out, and from the memory of rubbish and ruins there has arisen one of the most magnificent factories of which Derry can boast. Messrs. Hogg and Mitchell stand in the front rank of Derry's leading industry,—the shirt trade,—and certainly their new business premises are worthy of their extensive and extending connection. As one stands to gaze on the bulk of the factory, the eye travels up and up, for the building rises to an unusual height; yet massive indeed as are the materials, it swings up and up in airy gracefulness, for every floor is pierced with splendid and almost countless windows; indeed the whole idea it conveys is, that nothing has been spared that would give light and health, safety and convenience, to each and all engaged in the work of the firm of Messrs. Hogg and Mitchell.

It would be impossible here to go into the many and interesting details of this fine new factory, but a rough outline of its leading features may not be out of place.

The ground floor front towards Great James' street has been set apart for handsome shops (some indeed have already been appropriated), whilst the side frontage opening on Little James' street gives entrance to a most commodious and handsomely fitted suite of offices. Here, once again, one notices the splendid lighting that has been aimed at; the whole apartment is a flood of light, save in one corner where yawns the dark chamber of the big fire-proof safe, its massive door ajar.

Just behind the offices is one of the workers' entrances. It is a curious one, and its fellow entrance is to be found at the other end of the factory. Indeed from either end of the great factory building sweep up, in broad and massive coils of stone, two great spiral stairways of concrete; up and up they stretch, two mighty paths of safety for the workers' feet, and each giving a wide concrete entrance to every factory floor. We pass up the wide stairway, and enter on what is the

second storey of the building, but only the first floor of the factory proper. Here a surprise awaits one: what a curious feeling this flooring has? We look down, and lo, the whole wide floor of the factory from end to end of the great building, and from side to side of its brilliant windows, is one broad stretch, not of wood, but of concrete. The whole factory is cut off from the shops below by a fireproof floor. Not only do the workers enter by a stairway of stone, but they pass the threshold of their factory floor to find an impenetrable stone floor, a vast mass of concrete borne up on great steel girders, which effectually shuts them off from any danger of fire beneath. This first floor of the factory is the stock-room, and all along the spread of floor space stand piles of linen, and fabrics of all sorts,—yes, and finished shirts enough to clothe the whole army of the Sirdar, and leave a surplus for what few Dervishes he has left still living. Out again to the corridor, and up the concrete stair, we enter on floor No. 2, another vast apartment, of dimensions similar to that beneath; and here, close by the many windows, stand long double ranges of sewing-machines, driven by electricity. Upwards still we go to pass into No. 3—the pattern and cutting room,—with its strange flexible knives, driven by electric force, and with electric rapidity, turning and twisting, and flashing up and down through many piles of linen heaped one on another. The top storey—which is the fifth storey of the great building, and fourth floor of the factory—is just as big, as airy, and as full of light as the others; and here we find one side devoted to the packers, whilst at the other end stand ironing tables and their busy workers. We may mention that, on a sort of return off the great stairway near the office side of the factory, and reaching from top storey to floor, stand ample lavatories—to every floor a suite.

At the rear of the factory, on the ground behind that on which the shops stand, are to be found the wash-house and drying-rooms, with their whirling drums and circular water-ejectors; a little to the one side of those, the big dynamos that generate the force which drives the factory machinery.

To Mr. J. Ballintine, the builder, much credit is due for the planning of this very unique system of factory construction. It is a somewhat new departure in the literature of Architecture. It will be seen that all the little details of machinery, fittings, and wash-tubs, and all allusions to pilasters and string-courses—in fact, the petty technicalities that so often mar and cramp the effect to the public, are sought to be done away with, and the aim is, to let the factory rise up, in the eye of a reading public, big, massive, airy, and modern.

## LECTURES ON THE HISTORY OF ARCHITECTURE.

It is with much pleasure that we note that the Committee of the Architectural Association have very properly called the attention of the members to the series of lectures about to be delivered by Mr. Cecil Orr, A.R.I.B.A., in connection with the Science and Art Department, in the Metropolitan School of Art.

It has been often said that Dublin is very behindhand in the facilities available for the study of Architecture and the allied Arts and Sciences, yet we cannot hope for any very great improvement if our Students fail to take advantage of such opportunities as do come within their reach. The action of the committee shows them to be alive to the interests of the profession; the most important of which is unquestionably the education of the rising generation of architects. The Association itself is doing good work, as we learn from the Annual Report; but we also learn that the Classes have not been supported as they deserved. Such neglect on the part of the Students is nothing short of suicidal. With the ever-present question of Registration looming large before them, how can they expect to be equipped to take their place in the ranks of a profession such as that of an Architect—a profession which demands for its practice, even in the degree of the most moderate mediocrity, the application of every energy and the cultivation of every gift which the Student possesses. With many Students in this country the prevalent idea appears to be, that if they spend three years in the office of an Architect, and devote the limits of ordinary office hours to the blotting of tracings and the spoiling of good cartridge paper, that through the operation of some mysterious and intuitive process the elements constituting the Pupil are resolved into the elements constituting an Architect! Such, at least, it seems to us, is the view held at the present time in Ireland. The Association has, no doubt, effected some change in this respect, and, if its members stick together, it will do yet more. But, as Mr. W. Kaye Parry observed at a recent meeting, in seconding the adoption of the Annual Report, "The real work of the Association is done in the Classes, and the more showy work of the general meetings is useless if there is not behind it the backbone of real study and hard work."

We cannot press these facts too much on the attention of the younger members; and when we feel and know as we do, that effective Registration in some shape or form is inevitable and but a question of time, and when we contrast the position of the professions of Law or Medicine with that of Architecture, can any well-wisher of the calling desire that it should be otherwise? We believe the time is not distant when every aspirant will be compelled to be at least as well equipped and fitted to engage in the practice of his profession as is the average dispensary doctor.

It may be called "Registration," or it may not; but the time is coming when no mere membership of a professional body, be it Association, Society, or Institute, will, without other qualifications, be acceptable in the eyes of the public.

We see the difficulties and perhaps impracticabilities of the schemes of Registration brought forward from time to time; but that a solution of the difficulty will be found, no sensible man can doubt.

It is with these things before our view, that we give a word of praise to the Association, for their action in calling attention to these Science and Art Department lectures. We note also that the committee have secured from Mr. Orr the valuable concession that he will specially adapt the Course to the needs of Students preparing for the Royal Institute of British Architects' Examinations.

We hold the hope that the committee having done their part in calling attention to what is unquestionably a great boon, the members will endeavour to repair their neglect of these lectures in the past. Mr. Orr's eminence as a lecturer is not unknown to the members of the profession in Dublin, and needs no commendation from us, therefore we hope to see a very full attendance indeed during the Course.

## THE ROYAL SOCIETY OF ANTIQUARIES OF IRELAND.

FIFTY-FIRST ANNUAL SESSION.

THE Annual General Meeting of above Society will be held in their new rooms, 6 St. Stephen's-green, on Tuesday, the 17th inst., at four o'clock.

The business to be transacted on the occasion will be:—

To confirm Minutes of last Meeting.

To elect Fellows and Members.

To receive the Report of the Council for the year 1898.

To elect Honorary Officers and Members of Council.

*Papers to be submitted.*

"The Antiquities of Fore, Co. Westmeath" (Illustrated with lantern slides), by Francis Joseph Bigger, M.R.I.A.

"A Fortified Stone Lake-Dwelling in Lough Cullen, Co. Mayo" (with lantern slides), by Edgar L. Layard, C.M.G. (Communicated by the Rev. J. F. M. French, M.R.I.A.)

"Notes on Crannog and other Finds in Co. Wexford," by Sir Thomas Grattan Esmonde, Bart., M.P.

"The monuments at Clonmacnoise," by R. A. S. Macalister, M.A.

"The Cryptic Element alleged to exist in Ogham Inscriptions," by R. A. S. Macalister, M.A.

"A Further Note on the Surroundings of St. Patrick's de Insula, Dublin; Restoration of the North Close, 1899; and the possibility of Recovery of the Ancient Well of St. Patrick," by Thomas Drew, R.H.A.

Arrangements are being made to have a Midsummer Excursion to the Western Islands of Scotland, in which the Cambrian Archaeological Association have arranged to join. The places of interest to be visited are:—

Sanda Island—Cross and St. Ninian's Church (see Captain White's "Archaeological Sketches in Kintyre and Knapdale").

Kildalton Crosses and Church, Island of Islay, seven miles from Port Ellen (see R. C. Graham's "Sculptured Stones of Islay").

Passing up the Sound of Islay to Oronsay, to see the Priory, Monuments, Inscribed Stones, and Crosses (see MacGibbon and Ross, "Ecclesiastical Architecture of Scotland"); and on to Colonsay, where there is one of the finest crosses in Scotland.

Crossing the Firth of Lorn, and passing up the Sound of Iona, the well-known Crosses and Ecclesiastical remains at Iona, west of the Island of Mull, will be visited, and sailing due north around Staffa, a good view of that island will be obtained.

Sailing north-west, the unique Ecclesiastical remains of the Island of Tiree will be

visited, and a landing may be made on the Island of Coll.

Passing west of Rum Island, the Island of Canna will be visited, to see the Ancient Cross (depicted in Stuart's "Sculptured Stones of Scotland").

Sailing up Little Minch into Dunvegan Loch, Isle of Skye, the Town and Castle of Dunvegan will be seen; the latter is the residence of The M'Leod of M'Leod; a portion of the house was built in the ninth century.

Crossing Little Minch to the Outer Hebrides, Rodil in Harris will be seen (Church with curious sculptures).

Passing through the Sound of Harris, and sailing north, the next call will be at Callernish, on the Island of Lewis—Stone Circles.

Dun Carloway Pictish Tower, on the north-west of Lewis Island, five miles north of Callernish.

Flannan Isles ancient bee-hive Oratory: North Rona and Sula Sgeir, in the North Atlantic, early Christian Oratories (see Dr. Joseph Anderson's "Scotland in Early Christian Times"; Muir's "Ecclesiastical Architecture"; and MacGibbon and Ross, "Ecclesiastical Architecture of Scotland").

The Stone Circles of Stennis, near Stromness, Maeshowe, and Kirkwall Cathedral, Orkney, will next be visited (see J. R. Tudor's "Orkney and Shetland"; Sir H. Dryden's "Kirkwall Cathedral"; and Farrer's "Maeshowe").

Sailing south to Keiss Bay, Caithness, the ancient Brochs, or Pictish Towers, now under investigation by Mr. Tress Barry, M.P., Keiss Castle, will, by his kind permission, be visited.

In the return journey Glenelg will be visited, to see the Pictish Towers there (see Dr. Joseph Anderson's "Scotland in Pagan Times").

Passing down Sleat Sound, round Ardnarmurchan Point, and through the Sound of Mull, Oban may be visited.

Eilean Mor, in the Sound of Jura, at the mouth of Loch Swine, will be visited (Cross and Stone-roofed Church).

Sailing south through the Sound of Jura, the party will visit Gigha Island, off the west coast of Kintyre, to see a reputed Ogam stone, the only one ever heard of in the west of Scotland.

It is intended that the steamer will leave Belfast on Tuesday morning, June 20th, at 10.30, returning on Thursday, June 29th, at 10 o'clock, p.m.; and the Excursion will, it is contemplated, occupy ten days.

An illustrated programme and map of the routes are in course of preparation.

## LORD IVEAGH'S GIFT TO DUBLIN.

LORD Iveagh's gift to Dublin is not only of a munificent but of a very practical kind. At his own expense he will clear away, under parliamentary sanction, an insanitary area in Dublin, and build on the cleared space workmen's dwellings, a lodging-house for single men, shops, and various recreation buildings—a concert hall, swimming bath, reading and lecture-rooms. The income derived from the dwellings is to be applied as an endowment fund for the recreation buildings, and what is not required for this purpose is to be accumulated for the purpose of building other dwellings. We need scarcely add that the buildings and money will be handed over to a body of trustees. It may, perhaps, be said that this is work which the Corporation of Dublin should do for themselves, and we are inclined to think that there is something in this. It is a scheme which is not likely to increase the public spirit of the municipality of Dublin, since it may incline them to hold their hand in other parts of the town, hoping that private generosity may take the place of general public spirit. But be that as it may, no more useful or practical way of employing great private wealth could be found than this. It has also this to be

said for it, that it is a complete scheme. There is at the present time a tendency among rich men to present buildings for some public object which afterwards do not fulfil their whole purpose for want of sufficient endowment. Lord Iveagh's scheme leaves nothing to be done by other persons; it is a completed whole.—*Builder*.

### THE ARCHITECTURAL ASSOCIATION OF IRELAND. IMPORTANT DISCUSSION ON QUANTITIES.

THE usual fortnightly meeting of the Association was held in the Grosvenor Hotel on Wednesday, 20th ult. There was a good attendance.

The President, Mr. HOWARD PENTLAND, R.H.A., occupied the chair.

Apologies were received from Messrs. Thomas Drew, R.H.A.; W. M. Mitchell, R.H.A.; W. Kaye Parry, M.A.

Amongst those present were: Messrs. W. G. Doolin, M.A.; Frederick Batchelor, Cecil Orr, F.S.I.; James Beckett, William Beckett, R.F. Lidwill, J.P.; Thomas Mackey, James Donovan, John Good, S. H. Bolton, George T. Moore, T. E. Hudman, Joseph Holloway, George P. Sheridan, A.R.I.B.A.; Anthony Scott, M.S.A.; William Scott, A.R.I.B.A., and A. W. Moore, and R. M. Butler, Hon. Secs.

Mr. J. P. Wrenn was elected a member.

The meeting took the form of a discussion on the subject of whether "Quantities should form the basis of a Builder's Contract."

Mr. John Good, who was the principal speaker, said:—Before entering on the subject proper for our consideration this evening, I would offer to you, Mr. President, the secretary and the committee of the Architectural Association of Ireland, my sincere and grateful thanks for the great honour you have conferred on me, in asking me to open the discussion on this important matter. But though I feel honoured, still when I see around me so many able and experienced authorities on matters touching questions of contract, I feel that, if prudence had been consulted, doubtless my position would more properly have been that of an interested listener, rather than that of a spokesman. Personally I know of no association in our city that has more laudable objects, or deserves greater support than your's. One of your principal objects is, I understand, to train the young minds that are engaged in your high and noble profession in our cities in the many intricate details, the many broad questions of principle, and many other difficulties that lie in their paths, by providing for them a place where they may meet together, exchange views, and discuss with others their troubles, and, on occasions like the present, to hear the views of others than of their own profession on matters of vast importance, and thus be educated to fill creditably the high position into which their duty calls them.

I need hardly say to this audience that the question of what a builder's contract should include, is not alone one of deep interest, but of great necessary importance to all those connected in any way with the building trade; and in order that we may thoroughly understand the question and one another, I think, it be well for me to define generally at the outset, what a contract is, and then what it should contain, because unless we are agreed as to these terms, it would be difficult, if not impossible for us to say whether these terms should include the element of Quantities.

1st. As to what a contract is, here, though it has taken some volumes to explain, I think we may boil it down, for our purposes, to an agreement between two parties, the one undertaking to do a certain work, and the other undertaking to pay a certain sum for that work.

2ndly. As to what a contract should contain. This also is a subject on which, as many

of you probably know, a great deal has been written; but to put a broad and generally accepted view, a contract should contain everything that is essential to a fair and equitable agreement between the two contracting parties.

Now I take it that these general interpretations, which I have given to these terms, are such as will be approved by all; and that being so, the question now resolves itself into this, whether the contract would be more equitable if Quantities were included, or, in other words, are Quantities essential to a fair and equitable agreement?

Quantities are (or more properly speaking should be) an accurate detailed statement of every item of labour and material necessary to carry out the work intended, following certain acknowledged principles, and put in the customary form.

Now let us consider what relation such Quantities have to the contract. When an architect wants estimates for any works of importance, he gets Quantities prepared, and then he (or the surveyor acting under his instructions) invites certain builders to tender for the work, stating that the Quantities have been prepared, where they may be had, where the plans may be seen, and when the estimates are to be delivered, accompanied by the priced Quantities, or detailed estimates as they are sometimes called.

Before passing I would like to point out here, that both the architect and the building owner are aware, when ordering the Quantities, that it would be unfair and unreasonable to expect builders to take out their own Quantities, and also that if the Quantities are supplied, the builders will make up estimates from them; the invitation I said mentioned that the plans might be seen at such a place, but it was never intended that the builder was to go there and check the accuracy of the Quantities, because in some cases he would be still there; but that he might see the character of the work, its situation, and get information of that nature which would affect the prices in his detailed estimate.

The tenders thus made up having been sent in, the architect and the building owner proceed to consider them, and having selected one, the detailed estimate of that one is opened, and, if found priced and extended in the usual way, the tender is accepted, and the contract is prepared; but here a serious change comes in: the Quantities which were supplied to the builder to tender on, the Quantities that were examined to see if his tender was fairly made up, are put aside, and have no reference to the contract which the builder is asked to sign, absolutely no reference, mark you, for they only come in as a schedule of prices to govern deviations, additions, or deductions, not anticipated when making the contract, the contract being made on the basis of the plans and specification.

This I contend is an erroneous and untenable practice, and contrary to all principle, and contrary, I need hardly say, to the essentials of a fair and equitable contract; for example, an ordinary commercial transaction where the stock of a premises is to be sold. I desire to tender for it, and apply for the stock sheet or Quantities, and with it before me I examine the stock and price it, and the total of these items is my tender. If it be accepted, I pay only for what goods I receive, irrespective of my bulk sum. If there is more of one and loss of another, it is added to or deducted from, and the total thus arrived at I have to pay. This is sound business, on sound commercial principles, and if it were thoroughly understood by the building owner, that the proposed contract would be similar, I am compelled to think that, in 99 per cent. of instances, it would meet with their approval, for no man worthy of mention wants more than he knows he is paying for.

Doubtless you will say to me that it is all very well to condemn the present system, but what alternative have you? Well, it

almost suggests itself, and it is this, that on whatever basis the estimates are invited and made, make your contract on the same basis. If you send plans and specifications to a builder to get an estimate, and he takes out his own Quantities, make your contract on the plans and specifications with his Quantities on a schedule of prices. If you send out Quantities for the purpose of getting estimates, then make those Quantities the basis of your contract; in which case the building owner will get exactly what he pays for—nothing more and nothing less; thus you fulfil the first great essential of a fair and equitable contract.

Now let us consider what advantages and disadvantages would accrue from such a system as I have proposed.

I have mentioned that the building owner would know what he was to get, and what he had to pay; but the builder would also have the advantage of not alone knowing what he had to give, but that he will be paid for all he does give. This may seem at first sight a very sanguine opinion, and may be challenged for unsound reasoning, as the building owner's liability is unlimited. But just as the builder is held responsible for the accuracy of his work, so should the surveyor be held responsible for his work. The routine would very probably adjust itself somewhat in this way. When it was found that Quantities were necessary, the building owner (or his agent) would get estimates for such, with the proviso, that the surveyor should indemnify the building owner against all liability for errors, following almost precisely the lines adopted with the building contractor; and it is well known that if the latter or his servants make any mistakes in the carrying out of the plans and specifications, the architect very properly calls on him to put such right. This is as it should be; a builder is paid for doing work in a certain way to certain measurements, and he accepts the liability, but why not do the same with the surveyor? I am sure no surveyor of repute will refuse the responsibility of his work, or will attempt to support the procedure that throws the responsibility of his work on the builder.

If such a system as this were the adopted and acknowledged procedure, it would clear the atmosphere of the surveyor's profession; the duties incumbent on surveyors would be properly done, by properly qualified surveyors; irresponsible and unqualified persons would be prevented from sapping and injuring the profession and standing of surveyors, because incapacity would be soon made apparent in such a system. Some of you know what a relief this would be in dealing with some public bodies. It will doubtless surprise some here to know, that when the fees on certain public works amount to beyond a small fixed limit, the work must be advertised, with the result that for taking off the Quantities of an important public building, offers are received I believe from classes comprising not alone surveyors, architects, and builders, and builders' office-boys, architects' assistants, surveyors' assistants; and even this does not exhaust the list, and their prices or offers are equally interesting variety; the minute instructs public authorities that the lowest tender should be accepted, except there is good reason for making a departure, and as no liability of any sort attaches to the surveyor's work, the only ground for passing over such a tender would be incapacity, and this, as you may imagine, would be a dangerous charge for any public body to make or sustain, consequently such authorities are frequently forced to give the work to persons whom they know are incompetent, and Quantities prepared by such persons often require (as I unfortunately know) more skill than a builder possesses, to price them, and sometimes more money than he possesses to finish the work; this system is known to some public authorities to be quite as black as it has been painted, and yet they tell us that they are powerless to alter it, because it is the practice of the city not to hold surveyors responsible for their work. But if this practice were

amended (as I trust it will before long), I am sure these authorities would only be too glad to fall into line.

This practice of incompetent persons taking off Quantities is not confined, unfortunately, to public works. In my little experience I have met some of it, and I will read you an extract from a letter, which may be interesting.

I was invited to tender for some work, some time ago, and the surveyor made a charge of £2 2s. for his Quantities, and wrote as follows:—"The charge for Quantities will not be returned; you will see in the specification a description of them; they are, I think, good enough for tendering on, anyhow, others are so doing, but are not so complete as surveyor's Quantities."

The approximate estimate for this work was about £500; and, assuming that eight supplied estimates, this gentleman would be getting £16 16s. or 3½ per cent. for Quantities that require the specification to explain them, and that were only good enough to tender on.

Another advantage that would accrue from Quantities being embodied would be, that Quantities would become a reference, and would settle difficulties that frequently arise as to whether the contract included certain items, such items as are not particularly specified, and as are not shewn on the plans, and the architect is then placed in a difficulty to know whether the general clauses would properly include such, and he is frequently compelled to give his decision against the builder, even though he knows that the builder is not paid for them; but, under the proposed system, the architect would be relieved of this unpleasant duty.

The only other point that I would like to mention is that of custom. This is very important, because any of us would be too slow to recommend what might be termed innovations in such an important matter as this; but I have before me the form of contract as used in Scotland, and also that as generally used through England, and that used in northern England; and I will first read you what the Scotch Form says on this matter, it being a very practical and well-framed clause, and doubtless it has given satisfaction to all parties (Clause 6):—"The schedules of Quantities supplied to contractors shall be considered as part of the contract documents to the extent of fixing the Quantities and of arriving at extra work or deductions at the finish, and the mode of measurement adopted in the schedule is hereby declared to be the " . . . . mode of measurement, 189 . . ." and the said mode must be adhered to in ascertaining at the finish where any excess or diminution of work has taken place during its progress, and re-measurement will only be resorted to with regard to items which either party can show reasonable cause for believing to be of greater or less extent than set forth in the schedule. Such re-measurement to be made by the party who prepared the original schedule, whom failing, by a neutral person mutually agreed on, and in case of non-agreement, by or at the will of the arbiter hereinafter mentioned. Contractors shall be responsible for the accuracy of the calculations on which their offer is based."

Now let us turn to Clause 18 of the London Form, and see what it says. Read Clause 18:—"The proprietor shall pay to the contractor for the full and perfect completion of his contract, the sum of £—. But if the architect shall direct any addition to, or omission of, or variation from the works, the value of such addition, omission, or variation shall be added to or deducted from the said sum £— as provided in clause 8, as the detailed Bills of Quantities supplied, such error shall be rectified, and an addition be made to the contractor or deducted from him, as the case may be, in respect of such error."

The only other custom reference I will trouble you with, is one from the largest building owners in the world, and that is Her Majesty's Government, and in every

contract they make, both large and small, the Quantities are the basis of the contract; and though I cannot approve of all they do, and the way they do it, yet I am bound to bear testimony to the satisfaction that this system of embodying the Quantities in the contract gives.

In conclusion, I claim that to include Quantities in the contract is only just dealing between man and man, and the system that has Justice for its foundation is one that is bound to succeed. Show me the nation that has succeeded on other principles; show me the man that has succeeded on other principles, and what is true of nations and of men is surely a worthy example for us to follow.

Mr. William Butler, Quantity Surveyor, wrote as follows:—

There still remains a source of grievance to contractors, and a cause of frequent disputes. I mean the present system of ignoring the Bills of Quantities as part of the contract. These documents are supposed to accurately represent the amount of work required to be done under the contract, and are prepared by some one who is no party to the contract in any respect. The contractor tenders upon the assumption that these Bills of Quantities represent all the work he has to do; but he can get no guarantee that this is so. The person who prepares the Quantities is not infallible; he cannot guarantee the accuracy of the Quantities, without *de facto* becoming a party to the contract, although, of course, not *de jure*. If he guarantees that he will pay the contractor say £20 for an ascertained omission in the Quantities, he must also, in order that the arrangement may be an equitable one, be entitled to receive, say £100, from the contractor for an ascertained error on the other side. This would make him a partner with the builder in the transaction, which is absurd. Therefore, the Quantities cannot be guaranteed by the man who prepares them.

The contractors are placed in this position:—A set of plans and a specification are prepared, representing a certain amount of work, and the builder is asked to undertake to do that work on the faith of a document which, as soon as the contract is signed, is put aside, and has no force as far as the amount and character of the work are concerned. In other words, the builder contracts to do a certain thing on the basis of something which has no direct relation to the contract. It is altogether a matter of faith, and of risk.

The obvious way out of the difficulty is to make the Quantities part of the contract, and then, if a question is raised by either the building owner or the builder, as to the fullness or insufficiency of quantities or description, let the parties agree beforehand that such discrepancies shall be adjusted by some one outside the contract, whose decision would be final and binding. In this way both the building owner and the builder are safe. The one pays for no more than he gets, and the other is paid only for what he does.

I believe the system in Scotland is such as I have suggested. Indeed it is still more precise; for in the first place a Bill of Quantities is prepared upon which the contractors tender, and when a tender is accepted, this bill becomes a schedule of prices, and subsequently the whole of the work is measured and valued according to the schedule.

If Scotch architects and builders, and the building owners—who, it may be assumed, are not likely to sanction any usage that would be to their detriment—find this system a good one, why may not Irishmen adopt it also?

The tendency of modern thought is in the direction of equity, and it certainly seems only an equitable arrangement that men should be paid for what they do, and for no more.

Mr. Andrew Bruntz, Quantity Surveyor, said:—I am of opinion that if Bills of Quan-

ties were included in a contract as forming its basis, the result would be—that should it occur that there were any discrepancies between the work shown on the plans and included in the specification, and that returned in the Bill of Quantities, these discrepancies would have to be accounted for on the completion of the contract; and should they be numerous, they would naturally lead to a re-measurement of the entire works. In which case the contract amount would have to be set aside, and the Bill of Quantities would be annulled, excepting so far as they would be applied to form a schedule of prices for valuing the re-measured works. The danger attending this procedure would be—that if the Quantities in the first instance were only to be used in order to estimate what would then be only the approximate value of a variable contract, and not, as at present, where they actually fix the specific amount of a binding contract—that it might lead to laxity in the preparation of Quantities, which would then form, not the principal, but a very diffident position in the contract.

If the amount of the contract were liable to be varied subject to the accuracy of the Quantities, an employer entering into a contract would have no guarantee as to the actual amount of his expenditure, which might possibly be increased, in a degree largely disproportionate to what he had in the first instance regarded as a definite contract, but which, if it were to be finally dealt with on the Bill of Quantities, as a basis of measurements, the contract would then in reality have no existence as regarded the expenditure, and would leave the employer in a state of uncertainty as to the amount he might be finally called upon to pay.

The effect of this uncertainty regarding the positive outlay would, to a calculating business man, be a certain deterrent from entering into a scheme of which he could not see the end. It might further have the effect of producing increased litigation as the termination to an enterprise embarked in by those who had courage enough to enter into such an uncertain undertaking; and as a natural consequence it might be expected that a decrease in private building investment would follow.

I, therefore, strongly favour the opinion that Bills of Quantities as at present used for ascertaining the specific and binding amount of the contract, and subsequently for the valuation of any variations from the contract, are employed in the most suitable manner, and that any departure from the present practice regarding their use, will be from their original purpose, and not likely to lead to any improved results.

Mr. Doolin held a distinctly negative view, and expressed the opinion that the builders could, if they wished, be the real employers of the surveyors, who should be responsible for their Quantities, and be taught to use greater care, such as would render mistakes of very rare occurrence. He himself, when practising as a surveyor, had paid £250 for an omission the first year in which he started.

Mr. Cecil Orr, F.S.I., speaking as a surveyor, said some architects held such extraordinary loose ideas on the subject of the manner in which Quantities should be taken out, that it became practically impossible to guarantee Quantities where the architect misstated the manner in which they should be taken out. Besides, the drawings were sometimes mere rough sketches. Architects' drawings supplied for the purpose of taking off Quantities should be full and clear.

Mr. James Beckett entirely approved of the principle of making the Quantities part of the contract. To his mind the Bill of Quantities as issued to the builders, was a detailed statement of the requirements of the employer,—a statement of what he wanted and what he asked builders to supply him with. If he neglected to include any necessary item, it was only fair and just dealing that he should pay for it.

Mr. William Beckett thought that if the Quantities were included in contracts, it would lead to endless complications, and he looked on the proposal as entirely impracticable.

Mr. R. F. Lidwill, J.P., agreed with Mr. Good.

Mr. R. Caulfeild Orpen said, in his opinion, it was but fair the Quantities should form the basis of the contract.

Mr. T. E. Hindman said it was only an elementary principle of every-day business to say that the employer should get what he was prepared to pay for, and nothing more.

Mr. Joseph Pemberton (Messrs. Pemberton and Son, builders), said:—

In common with most builders, I am decidedly of opinion that "Quantities should form the basis of a Builder's Contract," and I cannot understand why such a common-sense principle has not been adopted by architects long ago, considering the safeguard it would be to the employer, and the tendency it would exercise in minimising disputes over accounts for extra and omitted works.

Mr. Robert Farquharson wrote as follows:—

The subject you have for discussion is a very interesting one to both architects and builders. My own opinion is that Quantities should not form the basis of a Builder's Contract. If the Quantities were made the Basis of the Contract, the Quantity Surveyor would be the party to settle up a builder's account instead of the architect, who is.

Mr. Charles Geoghegan, F.R.I.A.I., wrote as follows:—

With regard to the question of Quantities, I beg to say that I consider it undesirable that they should be made the basis of the contract. In justice to our clients we should not leave them open to litigation, should it be found that the Quantities (which are rarely guaranteed) proved erroneous; and my own experience has taught me that it is much safer to avoid the introduction of any clause calculated to endanger our clients and bring indirectly discredit upon the profession.

Mr. John Kempster (of the firm of Patterson and Kempster, Quantity Surveyors) wrote:—

I do not think that they should be part of the contract, for the following reasons:—1st. Because such a course would necessarily always be in favour of the contractor, who would always be in a position to detect any errors which might be against him, while at the same time he would naturally not call attention to any that were in his favour, and the employer, on the other hand, would not be able in any way to check the Quantities on his part. 2nd. If this course was adopted, it would have a tendency to cause looseness in the preparation both of the drawings and specifications, and also of the Quantities, as it might be said that any omission or otherwise could be rectified afterwards, and that therefore neither the employer nor contractor would suffer any injury.

The President, in summing up, said that the discussion had proved a most interesting one. The subject was not one to which he had hitherto given very much attention; in fact, his ideas on the matter were not yet crystallised, but he rather held the view that each case ought to be determined on its merits. For instance, a job almost entirely alterations and repairs was certainly an instance in which the Quantities ought to form the basis of the contract. He would remind those present of course any views expressed that evening were only the expression of individual opinion, and in no way binding on the Architectural profession. In fact, as a body, the Architectural Association were in a neutral position, and the discussion was purely of an academic character.

## THE PRESIDENT'S ADDRESS, ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND.\*

ALLIED Societies will be the chief topic of my retiring Address to you, as it has been one of the foremost movements which have occupied your Council during the now long term I have been President. It seems but the other day that the great body organised and chartered as the Royal Institute of British Architects was through conservatism falling out of touch with the vast body of architects that had grown up in the cities of the Empire, at home and abroad, since its early foundation. An executive localised in London, though comprised of foremost and earnest men in the profession, had to realise that the membership and influence of the Institute was not extending as it ought, and appeal was made to architects in the provinces as to their apathy. From independent architectural societies came back the response generally—"How, under its present constitution, can the Institute look for any other state of things? The Institute as it stands represents a vast body of architects in London equal in number to all the architects of provincial centres, but is in itself practically a great provincialised and local society." In this controversy our Institute, as one of the remotest from London centre, illustrated the weakness of adhesion most pointedly, and, as in more or less degree, the position of an architect in any provincial centre. It is now a tribute to fair-mindedness of the London executive that it has by its acts in a marked degree adopted the views of the non-conforming provincial architects. Notable among its acts has been to widen the representation on its Council by admission of representatives from provincial centres. Here let me acknowledge the generous compliment conceded to our small Institute of the sister country—that, while the representative seats at the Council from the provinces generally are elective, limited in number, and sought as a distinction, it has been conferred on the Irish Institute that its president, being a Fellow of the R.I.B.A., shall *ex-officio* hold a seat on the Council without election. May I inform you also that the Council of the R.I.B.A., by recent bye-laws, takes powers, during their pleasure, to dispense with the entrance-fees of non-metropolitan members. Further, it takes privilege to elect without ballot to the Fellowship of the Institute the President of any allied society for the time being. May I, on retiring, urge on my successors to qualify for holding this position, if not already members of the R.I.B.A. In my case, during the years I have been your representative, I can assure you of what practical value I have found it to our society to be in communication and correspondence with the central body, to have recognition of the right to appeal to it, and the personal friendship and cordial goodwill of the leading architects of the day to the small knot of Irish architects. Let me further announce what advantages have been conceded to the provincial architect, brought about by the happy policy—I know not by whom first suggested—of allied societies to the Institute, which has in principle solved the problem of decentralisation of the R.I.B.A. England, Scotland, and Ireland have been systematically mapped out as architectural provinces and spheres of allied societies. As to there being a sole province of the Royal Institute of Architects of Ireland, with its centre in Dublin, that unit is not pleasing to me or creditable to professional spirit of the architects of Ireland. Can we, the executive of the sole architectural body of Ireland centered in Dublin, for an hour pretend that our sphere of influence extends over the great and growing City of Belfast, soon to surpass our city in numbers of its population, and, in the amount of architectural practice, probably at this moment in the number of

reputable architects practising in it. It is with great pleasure I announce to you, in ready response to a suggestion of mine, the presence of some brother architects from Belfast, and it is the desire of our visitors to have a talk with some of their Dublin brethren on this subject. That is the topic in connection with the advantages of architectural alliance most interesting to us at present. After enumerating the advantages to provincial architects under recent reforms of the R.I.B.A., the President continued—I desire to suggest to this meeting the appointment of a Standing Art Committee of the Institute, whose concern should be with public and civic improvements or disfigurements, architecture threatened with demolition or degradation, or neglected, and to direct public attention to them with authoritative opinion. Outrages on the dignity and beauty of our streets, which are the common inheritance of all citizens, are too often perpetrated by the ignorance or selfishness of individuals, or the density of official bad taste. Improvements which are possible and patent to the expert eye of the architect are dormant and unnoticed. "What is everybody's business is nobody's business." If architects will not move in such matters, what other body is likely to do it? Such an institution does good service in London in the form of a Standing Art Committee of the R.I.B.A., often aggressive to public bodies in general, and the London County Council in particular. It has even, I believe, extended its purview to Irish affairs, and has memorialised the Provost and Board of Trinity College that the fine work of Sir William Chambers should not be degraded by incongruous association in juxtaposition with brick building of the utilitarian artisans' dwellings type. To the cathedrals of Dublin it has given some intelligent interest. Surely there is a work to be done by ourselves gratuitously for our citizenship and our local affairs, in a like way with the right attaching to educated opinion to make itself heard, and, I believe, to be received well by our own Municipal Rulers, who in Dublin at least are on kindly terms with its architects. For instance—at the moment occurring to me—I have noted a casual reference at a late meeting of the Corporation to a scheme for providing office accommodation by in some manner dividing or utilising the grand circle under the Dome of the City Hall, the work of Cooley, of which we are so proud. Surely Irish architects should be vigilant as to what this innovation may portend, and, if a degradation or disfigurement, remonstrate. Again, we look down the Liffey to the western sunset from O'Connell Bridge, to point out one of the most exquisite pictures of Dublin landscape, and to see it marred, disgraced, and outraged by giant invitations to try somebody's bread, and as a corrective perhaps, following with someone's aperient pills, or, until lately, an infallible epileptic remedy! As if these were not enough, another firm all over the place suggests mineral waters, another to play its pianos. I believe it may not be in the immediate power of the Corporation to abate this eyesore, but I believe public opinion directed to it would bring home to individuals who perpetrate such things—in ignorance perhaps—they give grave offence and disgust to a community far more widely than they estimate—that such advertising is far more injurious than serviceable to their business. Skeleton skyscrapers begin to appear in the best architectural streets of our city. Advertisement hoardings are always with us. Is the municipal authority always assured that these may not be "got at" as "dangerous structures?" I have known one instance at least when the attention of our thorough-going City Engineer was drawn to the invasion of the beauty of Dame-street by 12-ft. letters being skyed upon a parapet, and how promptly he showed a stranger-invading firm that municipal Dublin had some powers in such cases. Tramways and trolleys, posts and cantilevers, and overhead wires, these are past praying against. The Juggernaut

\* Read at Annual Meeting on the 15th ult., at the new rooms of the Institute, 29 Lincoln-place.

of Progress passes by, and sorrowing architects must bow, but much of the beauties of cities—in Dublin, and very noticeable in newer Belfast—might have been saved to them, if such a public body as societies of Architects had watched over them. There just exists now, in a last stage of degradation and neglect, the last surviving hall of the twenty-four guilds of which the Corporation of Dublin was constituted fifty-six years ago—the Weavers' Hall in the Coombe. It is an interesting and fine old Queen Anne or early Georgian Hall, which it is a disgrace to the city to allow to disappear. It is not past praying for at least. If architects will not find it out, and direct public notice to it, and say that its dilapidations are not past repair, who will do it? Belfast, one day, in selfish greed for value of street frontage, wiped out from its map two little open spaces, with pretty trees which flanked and gave a simple charm to the entrance on its municipal thoroughfare of Donegall-place. More lately, it has no sooner acquired its first central area than it proceeds to spoil it for ever by planting its Town Hall in its centre, and blocking it, interrupting a grand line of central thoroughfare which might have made Belfast noticeable among cities. By blind bad taste and obstinacy, an opportunity is irrevocably lost which no architect could regard but with sorrow, or good citizens without regret. Yet in such a case exists no organisation to protest against the tyranny that forces on such schemes. When I have touched on the up-river disfigurement, some visitors may have wondered that a down-river disfigurement which freshly shocks their sense,—the notorious Loop Line outrage, was not alluded to. It is because it is for us, Dublin architects, ancient and painful history,—15 years old. It is a memory of that needless outrage of the beauty of a beautiful city, of the obstinate engineering doggedness which forced its way through our public thoroughfare to the West instead of the East of the Custom House, of the irresponsible tyranny of wire-pulling in such projects. The architects of Dublin, appealed to by the Press, took their part at the time in leading protest against what seemed a proceeding almost incredible in its extent and ill-design. It points the moral of the necessity of some volunteered censorship to defend the rights of citizens in their own city. To no architect can that ill-starred blot upon the City of Dublin be ever anything but a distress, with its ragged-ended rusty girders above, and its manifestly sham and inadequate pieces of foolish architectural pretences below; its five specimens of absolutely differing and incongruous pieces of bridge-building going to make up one quarter of a mile of a continuous viaduct, and, we may add, each specimen more uncouth than the other as you get northward, and, behind all this, Gandon's Custom House, once the pride of Dublin as you viewed it from old Carlisle Bridge, blotted from pictorial Dublin for ever! But, gentlemen, it can only be said in Press language, not unfamiliar in the annals of crime, "no one was brought to the bar of justice in connection with this shocking event. The perpetrators may be still alive and walking in our midst, but in all human probability will never be discovered." With such suggestions for the extended work of our Institute, I vacate the chair with a sense of the friendship and loyalty and unselfish co-operation of colleagues through a long term of years, such as I believe has never been accorded to any president of a like society to ours.

#### THE OFFICE OF ASSISTANT TO THE CITY ARCHITECT.

At the monthly meeting of the Corporation, the following were announced as candidates:—

Harold Clarke, 66 Conduit-street, London.  
Joseph F. Delany, M.R.I.A.I., C.E., 7 Adelaide-road, Dublin.  
Vivian A. Haghe, M.R.I.A.I., 101 Marlborough-road, Dublin.

Robert T. M'Arthur, 97 Prescott-road, St. Helen's, Lancashire.  
D. G. Mootham, A.R.I.B.A., County Surveyor's Department, Guildhall, Westminster, S.W.  
Thomas Mundy, Council Offices, Spenny-moor.  
Marius L. Murphy, Ovoca-road, South Circular-road.  
William Taylor, 119 Rathgar-road.  
Messrs. Clarke, Mundy, Murphy, and Taylor, were disqualified for non-compliance with the terms of the advertisement.

For Delany—37 votes.

For Haghe—4 votes.

Mr. Joseph F. Delany was declared duly elected, and a formal resolution to that effect, proposed by the Lord Mayor, seconded by Mr. Beardwood, was carried unanimously. Mr. Delany returned thanks.

[From personal knowledge of Mr. Joseph F. Delany for some years, we believe that he is fully competent to fill the position under the City Architect, Mr. C. F. MacCarthy.—Ed. I. B.]

#### MEMORIAL TO THE LATE ARCHBISHOP PLUNKET, IN CHRIST CHURCH CATHEDRAL.

As a companion to a memorial brass erected in the year 1888 to the memory of Archbishop Trench, in the choir of Christ Church Cathedral, another brass, of similar dimensions, has been placed on the south respond of the sanctuary arch. The brass contains an admirable portrait figure of the late Archbishop in his robes. The material is of rich brass "laten." The sketch design was made by Mr. Thomas Drew, R.H.A., the architect to the Dean and Chapter, and the work was carried out by Messrs. Heaton, Butler, and Bayne, of London. The memorial bears the heraldry and arms of the Plunket family, and the heraldry and arms of the Diocese. The inscription which it bears is as follows:—

Gulielmus Conyngham-Baro Plunket, S.T.P.

Annos VIII. episcopus Hibernie, H.E. Archiepiscopus, Dublinensis, Deo omnia deditus, sui incuriosus, rector suavis, Amicus fidelis, domi pius, foris urbanus, consilio sagax, eloquio disertus, gestu humilis, animo mansuetus toti urbi carus bixet, obiit desideratus. Fidem Christi, quam exemplo illustrabit, posteris tradendam sedulo curabit. Patriam dilectissimam verbo, opibus, laboribus, Pro virili sustentabit, Dominum, quem summis viribus Coluit, animam in spe et pace reddidit. Kal Apr. A.C. MDCCCXCVII. Aetatis LXX.

#### THE ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND.

##### ANNUAL MEETING.

The annual general meeting of the above named Institute, was held yesterday afternoon in the new rooms, 20 Lincoln-place. Mr. Thomas Drew, R.H.A., presided.

Amongst those present were:—

W. M. Mitchell, J. R. Carroll, Charles H. Ashworth, F. Batchelor, F. L. W. Blount, W. J. Gilliland, C. Geoghegan, W. G. Doolin, C. J. MacCarthy, R. S. Swan, R. M. Butler, A. W. Moore, J. Holloway, R. C. Orpen, G. P. Sheridan, G. L. O'Connor, E. H. Morris, J. H. Webb, H. Allberry, W. K. Parry, R. H. Webb, H. Allberry, W. K. Smyth, Cecil Orr, F. Franklin, R. C. Millar, J. H. Pentland, C. A. Owen, E. Hayes, J. F. Delany, F. Hicks, L. Deane, A. E. Murray, hon. sec.

The Hon. Sec. read the Annual Report (already given in our last issue).

The President then delivered his Address, which we print on another page.

Mr. Walter G. Doolin, having expressed his hearty appreciation of the President's

Address, said he thought that a helping hand and support should be extended to the Architectural Association of Ireland and the younger members of the profession.

Mr. J. Rawson Carroll thought that while Registration would be of great use to them as well as to the public, still at present, if properly regarded, membership of their Institute was a sufficient guarantee of a man's efficiency. He offered the chairman hearty thanks for his able address and for his services to the Institute.

Mr. Cecil Orr thought they should do more for the Architectural Association, and help them on. He thought there should be some qualification more than mere membership of the Institute. His recollection was that the attitude of the Institute originally was in favour of Registration.

Mr. Butler supported Mr. Orr's views.

Mr. W. J. Gilliland (Belfast) spoke in favour of Registration. They would never be protected until they had it. He was, therefore, entirely opposed to that portion of the report which rather jumped on Registration.

Mr. W. Kaye Parry said he was far from believing that the end-all of an architect's ambition should be merely membership of their Institute, but he thought it was a useful step and assistance.

On the motion of Mr. J. Rawson Carroll, seconded by Mr. Wm. M. Mitchell, the following resolution was passed:—

That a standing Art Committee, on the lines and exercising functions similar to those of the Standing Arts Committee of the Royal Institute of British Architects, be appointed in connection with the Royal Institute of the Architects of Ireland.

A ballot for President, Hon. Secretary and Treasurer, and Council having taken place, the result was announced as follows:—

President—Mr. Thomas Drew.

Hon. Secretary and Treasurer—Mr. Albert E. Murray.

Council—W. M. Mitchell, J. Rawson Carroll, J. H. Pentland, George C. Ashlin, George O'Callaghan, Charles Geoghegan, W. Kaye Parry, Walter G. Doolin, Cecil Orr, and F. Batchelor.

#### TENDERS.

For the erection of a Sub-transformer Station, for the Corporation:—

-- Pemberton	- - -	£1,435
J. Pemberton and Sons	- - -	1,410
W. Connolly and Son (accepted)	- - -	1,395

For additional sanitary work at the Artisans' Dwellings, Benburb-street:—

Curtis and Sons	- - -	£331 5 6
Gleeson and O'Dea	- - -	273 10 0
Joseph Boulger	- - -	275 0 0
Dobson and Curtis	- - -	274 13 8
J. F. Keatinge	- - -	260 0 0
Maguire and Gatchell (accepted)	- - -	259 17 6

For the construction of a covered concrete reservoir at Ballysillan, Belfast. Mr. A. Ferguson, Belfast, surveyor:—

W. J. Campbell and Sons	- - -	£11,900
J. McKee and Sons	- - -	11,083
J. and W. Stewart	- - -	10,943
Courtenay and Co.	- - -	10,590
W. M'Larnon	- - -	10,548
H. and J. Martin	- - -	10,450
H. Lavery and Sons (accepted)	- - -	10,400

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## THE IRISH BUILDER.

Vol. XL.—No. 938.

AN EMINENT ENGINEER—  
SIR JOHN FOWLER.

**T**HE death of Sir John Fowler removed from our midst one who, in a peculiar degree, was representative of modern engineering achievement. He was (says the *Times*) one of the few great engineers remaining whose reputation was made amid the first mad rush of early railway enterprise; he had lived to bear largely upon his individual shoulders the burden of constructing the so-called "underground railway"—an achievement which, for the time when it was carried out, was one of gigantic difficulty; he had designed, with the aid of Sir Benjamin Baker, the greatest railway bridge which the world has yet seen; and ere he died he had learned that the Sudan Railway to Khartum, which he had planned and commenced in 1875, was on the eve of completion. There are few living men whose record was more closely associated than was his with some of the greatest triumphs of this century.

The same journal proceeds to give the following particulars of Sir John Fowler's career:—

Born in 1817 at Wadsley Hall, Sheffield, he became, at the age of 17, pupil to Mr. J. T. Leather, the hydraulic engineer. In that capacity he was associated with many of the engineering schemes which were at that time carried out for the water supply of Yorkshire and the surrounding districts. After an interval of two years, spent as assistant to Mr. Rastwick in the preparation of drawings and contracts for the London and Brighton Railway, he returned to Mr. Leather as responsible resident engineer on the Stockton and Hartlepool Railway, and was subsequently engineer, manager, and locomotive superintendent of that railway. At this time young Fowler was 26 years of age, and had acquired experience of an unusually varied and practical kind. He started on his own account, and rapidly obtained a very considerable practice as chief engineer to a number of railways which were then passed through Parliament, notably the Sheffield and Lincolnshire and the Great Grimsby Railways, which he successfully carried out. The latter railway gained him considerable reputation, so that, when the full fury of the railway mania broke forth, not only were his services eagerly sought by railway promoters, often for the most fantastic schemes, but proposals for railways all over the country were indiscriminately named after the Great Grimsby by their promoters. It was the tenth such scheme that prompted Lord Devon, the then Chairman of Committees, to exclaim, "What, Great Grimsby again! Go it, Great Grimsby!"

But perhaps to the general public the most interesting portion of John Fowler's work was that connected with the design and construction of the Metropolitan Railway. At the outset almost insurmountable difficulties were encountered from the opposition of vestries and owners of properties, and, when to these were added the discouraging prognostications of failure from many of the most eminent engineers, it is not surprising that at times the success of the scheme should have at the best appeared doubtful. Through all this the stern determination and confidence of Fowler was unshaken. When the first portion was at length opened, traffic flowed in beyond the expectations of the most sanguine. The first Act for a line from Edgware-road to King's-cross was carried in

1853, and after the financial support of the Great Western Railway to extensions at both ends had been secured, a further Act was obtained, in spite of strenuous opposition. It was not, however, till 1860 that capital was secured and the work commenced. After further extensions had been obtained, it was decided in 1863 by the House of Lords that the railway should be continued to form a circle, connecting together all the principal termini. It is to be regretted that Mr. Fowler's scheme for a second complete circuit, which should accommodate all through goods and passenger trains without interfering with the terminal traffic, was negated through the unfulfilled undertakings of other lines. It is not too much to say that the experience gained during the making of this railway revolutionised the ideas of engineers as to the possibilities of constructive engineering. The huge expenditure upon Parliamentary opposition, way-leaves, compensation, alteration and replacement of sewers, water and gas pipes, and other obstructions, has handicapped the paying powers of this great pioneer enterprise. But the lessons then learned, and the improvements introduced by John Fowler and Sir Benjamin Baker and others who have since been associated with Fowler, have rendered possible the construction of those cheaper tunnelled lines which now promise to relieve the congestion which has overtaken the street traffic. With almost all these recent schemes—for instance, the City and South London, the Waterloo and City, and the Central London Railway—Sir John Fowler's name has been associated. Another great work upon which Mr. Fowler was employed was to investigate and report upon the most suitable gauge for the less important Indian railways. It will be remembered by many that in what has been called "the battle of the gauges," Mr. Fowler was always on the side of uniformity of gauge wherever possible, and it was his recommendation of a 3 ft. 6 in. gauge, as compared with the 2 ft. 9 in. gauge, recommended by his colleagues on the Commission, which influenced the Indian Government to choose the metric gauge, which has been so largely adopted for the lighter railways of the Indian Empire.

From Mr. Fowler's connection with India, it is peculiarly interesting at the present time to turn to the part which he took in the development of Egypt under Ismail Pasha. A visit to Egypt, made in 1868 for the benefit of his health, brought him into contact with De Lesseps, who was then just completing the Suez Canal. Mr. Fowler joined a party who went to view the undertaking, and a letter which he wrote to the *Times* on that occasion was described in a leading article upon the subject as the judgment of an engineer of the highest eminence and repute. A further visit in the following year with the Prince and Princess of Wales brought him into the direct contact with the Khedive, who eagerly sought his views as to the large schemes of improvement which he was then contemplating for Egypt. He became consulting engineer to the Khedive and the Egyptian Government, and in that capacity, among other undertakings, planned a Nile railway to run from Wady Halfa to Metammeh, and thus with water connecting links to form a junction between Cairo and Khartum. Had this scheme been then carried out, how many British lives, including that of the hero Gordon, and how much treasure might have been spared! It was in consideration of his work for the benefit of Egypt that in 1885 the Queen conferred upon him a Knight Commandership of St. Michael and St. George.

Of Sir John Fowler's work upon the Forth Bridge so much has been written that any addition is here superfluous. His association with Sir Benjamin Baker in that work was only the continuation, perhaps the crowning point, of the work which they had for many years carried on together, and which has continued until death has removed the elder partner. In recognition of the greatness of this achievement, a baronetcy

was in 1890 added to the honours which Sir John Fowler already possessed. He was president of the Institution of Civil Engineers in 1866, and delivered from the chair a very memorable address on the requirements of a complete engineering education. In 1890 he received the honorary degree of LL.D. from Edinburgh University.

## HIGH-SPEED ENGINES.\*

In applying provisions for eliminating knock in double-acting engines, the author had found that the ordinary rates of rotation could, with practical immunity from overheating, and an absolute freedom from seizure of bearings, be exceeded to the extent of 30 per cent. to 50 per cent. This had been effected by providing a close-up, and at the same time expansible, adjustment of bearing brasses, and so reducing the production of heat to only that caused by the rotation of a shaft as distinguished from the usual cause of seizure—namely, the expansive force of the metal of both journal and brasses.

At moderate rates of rotation, say 300 revolutions per minute, an audible knock took place with a 1-500th inch clearance in the bearings of double-acting engines, and a rise of temperature of 20° or 30° F., which almost always took place in practice, would expand the bearings more than that amount of clearance, and therefore an engine, if fitted with fixed brasses, was always liable, with little or no warning, to become overheated, and to seize in its bearings. The provisions which were made for avoiding the usual consequences of heating were very simple, and consisted of a small ram of the hydraulic pressure type, which was made to bear on the adjustable brass of a bearing. On the alternative stroke of an engine, when the working pressure was not on the adjustable brass, the ram was forced through its packing by a spring of sufficient strength to overcome the friction and the inertia of the ram and parts, and in such manner placed the adjustable brass close on its journal. This action caused a slight clearance in the ram cylinder, which was instantly filled by liquid from a reservoir which entered by a back-pressure valve. The shock of the working stroke of the engine acting upon the liquid inside the ram cylinder instantly shut the back-pressure valve and confined the liquid as a packing at the back of the ram, and so maintained the adjustment of the brass which had been made by the spring. Similar fittings were provided on all the reciprocating bearings of an engine which were usually subject to knock.

It had been found that all surfaces of close-up bearings which were not continuous had been lubricated separately, as there was not sufficient oil left from the first to supply a second after part had been lost in the joint space. White metal had been found practically necessary at very high rates of rotation, and the risks of its melting out had been guarded against by such a backing of other metal as would not allow of sufficient clearance occurring in such an event as would cause the pistons to knock in the cylinder ends.

The value of close governing had been very much underrated, and economies had been sought in reducing the coal bill by various expensive expedients in other ways than by increasing the output and quality of work as it could be done by good governing. It could be shown that by running to within 1 per cent. or 1½ per cent. total variation in the speed of an engine, an increase over ordinary results in the quantity of work could be produced which in many cases amounted in value to more than the whole of the coal bill. The possibilities of close governing by the various types of governor in common use had been investigated, and it had been found that dead-weight loaded governors of the ordinary type, even when compensated for change of position, could not be moved by

\* Abstract of Paper by Mr. J. H. Dales. Read at Institution of Civil Engineers (London), on the 10th inst.

any less variation of speed than about 2 per cent. from the normal, or a total variation of 4 per cent., taking no account of any work to be performed in the way of moving trottle or expansion apparatus. Spring-load governors with angular arms pivoted, as in the former case, on plain pins, could be moved with a variation of  $1\frac{1}{2}$  per cent. from the normal, or a total of 3 per cent., taking no account of the performance of any governing functions. Spring-load governors, fitted in all joints with ball bearings and designed with small relative inertia and high speed, had been made to work auxilliary apparatus with as little variation of speed as  $1\frac{1}{2}$  per cent. total and had governed engines within those limits.

Perfect governing could be obtained when (1st) the direction of the strains of centrifugal force were not diverted; (2nd) such strains were directly radial; (3rd) the friction and inertia of the centrifugal generating parts were reduced to a minimum; (4th) the mechanical relations of the governing parts were constant; (5th) the inertia of the centrifugal generating parts, whilst very small relatively to the centrifugal forces, were as far as possible in excess of the driven parts of the governing apparatus. These points were embodied in a fly-wheel governor dealt with, in which the load springs were arranged radially, as also were the spring-boxes and guides belonging thereto, so that the centrifugal forces caused no cross strains. The springs formed a large part of the centrifugal weights, and had a peculiar effect upon themselves which was illustrated by a diagram. The motion of the governor in performing its functions, was transmitted to the expansion eccentric by means of a spur wheel mounted on a sleeve which was solid with the eccentric, and was actuated by means of rack teeth formed in the spring-box sides, giving a practically constant mechanical effect in the action between the governor and the expansion eccentric. The inertia of the governor was in excess of the driven parts as about 3 to 1, while the centrifugal weights were about 2 per cent. of the total spring-load. The total average centrifugal force of the governor was about 3,000 lbs., and the only cross strains on the spring-box slides were those brought about by driving the cut-off eccentric, and those strains were relatively very small, as the cut-off valve was worked by a rocking shaft and twisting spindle in order to avoid the friction of a pulling spindle and the effects of the steam-pressure on the same. The arrangement could be adjusted so as to govern an engine to 1 per cent. total variation throughout the whole steam range of the expansion gear, which was about five-eighth cut-off from zero, and without racing. The expansion motion was reversible with the same set of parts.

In regard to the possibilities of fine governing, the principles of a cut-off governor were much more favourable than those of a throttle governor in any engine having any cut-off and a reciprocating action. The cut-off admitted of no accumulation of pressure during the closed time of the working stroke, as in the case of a throttle governor, and therefore no action of a governor working a cut-off was required stroke by stroke, as in the case of any attempt at fine governing by a throttle. In the case of the cut-off a simple change of position of the governor was alone needed to alter the steam supply; while in the case of the throttle, not only was a change of position necessary, but a constant approximate cut-off action which had to be produced by a constant fluctuation of the speed of the engine, and which defeats the very effect of regular running which it is desired to produce. A throttle would be perfectly suitable to govern a true rotary engine, that was one of constant torque, but its principles were opposed to perfect governing of any engine having any cut off.

The adjustment provisions dealt with increased the power value of an engine and its steam economies, and rendered it more reliable than ordinary fixed bearings at low

speeds, while dead close governing increased the quantity and quality of work produced often to an extent of equal value to the whole of the coal bill. High power in small engines effected a saving in first cost, attention, maintenance, space and buildings; and high speed in the case of electric lighting considerably reduced the ordinary cost of dynamos. Also, under full load, strain economies could be had in small engines equal to those which were obtained from large engines, despite the fact that the clearances of small engines were necessarily greater proportionately than those of large or, rather, long stroke engines. This was accounted for by the relatively small cylinder losses in engines running at a high rate of reciprocation.

#### CORRESPONDENCE.

##### "SHOULD QUANTITIES FORM THE BASIS OF A BUILDER'S CONTRACT?"

TO THE EDITOR OF THE IRISH BUILDER.

SIR,—It would seem from your Journal of the 1st inst., that the discussion originated by the Architectural Association of Ireland, at their recent meeting, on the subject of Quantities forming the basis of a builder's contract, was of a very interesting and useful character. The Association, and its worthy secretary, are to be congratulated on the good work they are doing, from an architectural, and also from a practical, point of view.

If you will allow me the hospitality of your columns, I should like to make a few remarks by way of review of the opinions set forth at the meeting referred to.

First, let me say, I thoroughly agree with Mr. Kempster, that Quantities should not be part of the contract, and it would appear to me that he alone gives the real reasons why they should not.

Mr. Good has gone very completely into the question at issue; and, perhaps, from his point of view, he is right enough in what he advocates.

Many of the opinions expressed at the meeting seem based on the assumption, that serious errors are usual in Quantities. This is not the case, in my opinion. When the architect puts his views definitely and clearly on paper, and employs a competent surveyor, and gives reasonable time to prepare the Quantities, there is no reason why an absolutely accurate Bill of Quantities should not be prepared.

Mr. Good, in dealing with surveyor's liabilities for errors, should bear in mind, that, after all, liability is real only, so far as it can be legally enforced. It is quite clear, from English decisions, that unless a surveyor is found to act fraudulently, he is not responsible for errors. Mr. Good also complains, that Quantities are issued that cannot be priced. The remedy is obvious. Builders should not tender on Quantities that are not, at least on the surface, properly prepared. The suggestion that Quantities should become a reference to settle difficulties arising during construction, I do not like at all. Drawings can be made to show far more clearly than ever Bills of Quantities could, what is intended by the architect, who alone is the proper authority, and who, in my opinion, needs no assistance from Bills of Quantities in this direction.

I cannot agree with Mr. William Butler that proper Quantities could even remotely, give rise to disputes; but, I am of opinion that trouble would result if they were made

part of the contract, not because Quantities cannot be accurately prepared; but, because, as Mr. Kempster writes:—"Such a system might tend to looseness in the preparation of drawings, specifications, and quantities."

Mr. Bruntz says that, if Quantities are made part of the contract, in the case of discrepancies the contract would have to be put aside, and the Bill of Quantities would be annulled, except so far as to apply it as a schedule. This reasoning appears to me fallacious. Such a result could only happen if the drawings were seriously defective, or, that the architect did not make them convey his intentions, or, that the Bills of Quantities were prepared at random. If the architect puts his intentions clearly on paper, and then employs a surveyor who knows his work, how can it arise that all this would be thrown to the winds? Mr. Bruntz's reasoning against the reformed system holds good against the existing system, if the surveyor's work is inefficiently done. The employer, Mr. Bruntz also says, would have no guarantee as to cost. This could hardly be, unless both architect and surveyor did their work in reckless fashion. Mr. Bruntz and myself agree as to his conclusion; but I disagree as to his premise, and as to the reasons put forward for his conclusion.

Mr. Doolin contributed a very interesting item to the discussion. He says:—"The builders should be the real employers of surveyors; and, that his first year's practice as a surveyor cost him £250. My wish would be that surveyors should be as independent of builders as architects are. The modern tendency is clearly this way. Mr. Doolin's first year as a surveyor, if he is properly reported, was a unique experience."

Mr. Cecil Orr, in my opinion, contributed very useful matter to the discussion. Addressing an audience largely composed of young architects, his views as to drawings required to prepare Quantities, are most admirably to the point. No one would benefit from this more than the architect himself.

In fine, I do not believe it would help anyone to have the Quantities made a part of the contract; such a practice might, in addition to other drawbacks, tend to lessen the architect's authority. It is essential in building contracts that the architect should be and remain the sole authority. Any change infringing on his personal authority should be rigidly avoided.—Yours, &c.,

D. W. MORRIS.

68 Harcourt-street, Dublin,  
11th January, 1899.

##### BENEFITS TO BE DERIVED FROM FREE PUBLIC LIBRARIES.

TO THE EDITOR OF THE IRISH BUILDER.

SIR,—We assent every day to excellent commonplaces, without showing by action that our belief is heartfelt. Among these commonplaces of late has figured the proposition that Free Rate-supported Libraries are a good. Especially in Ireland does our assent to this proposition seem unratified by corresponding action.

That Free Libraries on the whole are a good, will be questioned by very few people who consider the matter carefully. Of course incidental abuses of their purpose are possible and do occur, but this is true of other institutions, of courts of justice, of hospitals, and even of churches. And if we are stopped by the fact in the case of Free

Libraries, we may as well make no disinterested efforts of any kind! Incidental abuses must not deter us from pursuing that which is good in its essence.

Perhaps we are inert in the Library question, because the praise of Libraries in general terms has been hackneyed until our feeling for its truth has grown slack. Reinforcement of that feeling may then be gained by considering details such as the following:—

*Something* people will read, whether we like it or no. Decent selection on a large scale, of what is to be read, can be secured by the agency of a Free Library, where a committee of sensible men choose not only such books as *ought* to be read, but such as *can* and *will* be read.

Further, how strange it is that, in Ireland, where so much is said on the importance of Education—how strange that the value of Public Libraries as quiet inobtrusive Schools, is not more fully recognised. Amid the din of controversy as to what shall be taught, and who shall teach it, the Free Library, by its undogmatic nature, and by its universal scope, should succeed with all classes, creeds, and conditions of intelligent people. A well-administered Library is an unegotistic but perfectly capable College of teachers, no one of whom will force his learning on a reader who desires it not; while every reader may obtain what suits his particular needs.

Again, all who wish that the local history and topography of our country should be more carefully preserved, will rejoice to think that there is a place in every town and large village, which may serve as a repository for local newspapers, maps, pamphlets, and other publications, which seem trifles while new, and yet are of unspeakable importance when years have gone by, because they mirror the past world.

The philanthropist will rejoice that, when rain makes the streets sloppy, and when all is fog and cold, and stupidity out of doors, the respectable wage-earner may enjoy the pictorial papers, or interesting magazines, or may work at some favourite study—in science, or his own craft, or history, or travel, or biography. In a popular reading-room there would be interesting maps and illustrations on the walls, which would carry the mind with pleasure and profit to scenes far away from those to which we are limited by our daily round.

The clergyman will recognise in the Free Library a powerful helper, the more powerful because inobtrusive. The friends of the Free Library often quote Carlyle's celebrated phrase, "the University of the People"; and another phrase which helps to fill out the conception of the powers of a popular Library, with good and useful books, well-managed, is that which dubs it a "Secular Church."

The chief places in Ireland which possess Free Libraries are: Dublin, Belfast, Cork, Limerick, Waterford, Dundalk, Newry, Sligo, Kingstown, Rathmines, Coleraine, Banbridge, Newtownards, Lurgan. The old historic cities of Derry, Kilkenny, Galway, Drogheda, Wexford, and Armagh are still without rate-supported Libraries; and so are Lisburn, Ballymena, Pembroke Township, Queenstown, Carrickfergus, Clonmel, Tralee, Portadown, Blackrock, Drumcondra, Athlone, Omagh, Naas, Carlow. In some counties of Ireland there is not a single rate-supported reading-room which is

*the property of the citizens in general, and free to all*, with no introduction needful save cleanliness of person, and good conduct. In various places there are, no doubt, useful subscription Libraries, and parochial Libraries. But these are necessarily inadequate; they lack funds even for short effort; and, still more, they lack that continuity of steady support which can be guaranteed only by the regular self-taxation of the whole intelligent community.

Moreover, a rate-supported Library implies the valuable influence upon men's natures produced by the consciousness of a common responsibility entered on for a good purpose. The possession of a Free Library is a power to bind together the whole of a town or a county, and tends to produce a wholesome corporate feeling. The community will believe that the merits of the Free Library are due to the community, and, where defects in the Library are proved, every man will feel that common action with his fellows is needed to make these defects good.

The business of ratepayers in Irish boroughs where the Library rate has not been levied yet, is to request their governing bodies to take a poll on the question of imposing the rate. Will the citizen who pays on a valuation of £20 grudge 1s. 8d. a-year towards a Free Library? Let us hope that Kilkenny and Galway will not continue to be outshone by Lurgan, nor Drogheda by Banbridge, nor Wexford by Ennis, nor the Pembroke Township by Kingstown and by Rathmines. Many small towns might impose the rate with good result by a careful matching of their aspirations with their powers. If in a small town there is not money enough raised to keep the Reading-room open all day, let it be kept open from six o'clock till ten in the evenings. This has been the useful compromise in some little places in England.

A large literature of the subject exists, and it is hoped that some whose attention is caught by those remarks, will refer to the publications of the Library Association of the United Kingdom, to the admirable Library Journal of the American Library Association, to Greenwood's Library Year Book, and to Ogle's History of Free Libraries.—Yours, &c.,

THOMAS W. LYSTER,

Librarian, National Library of Ireland.  
January, 1899.

#### THE ELECTRIC LIGHTING OF COUNTRY HOUSES.\*

MR. Drake said that to the multifarious knowledge of the architect must now be added a grasp of the "practices" of electric lighting and its attendant paraphernalia. He should confine himself to the practical points which crop up daily in an architect's office, and are searched for in vain amongst the text-books at his disposal. In lighting a country house, the first question concerns the provision to be made for the generating plant, and where it shall be put. The various developed methods at disposal are:—1, Steam engine; 2, petroleum engine; 3, gas engine; 4, water-wheel or turbine; 5, wind engine; 6, primary battery. The advantages and disadvantages of each method were fully considered by the author, whose own experience was that a combination of gas and petroleum, or turbine and steam-engine, gave the best results. Each case, however, required an individual study of the local conditions and working requirements before deciding

what would be best; it was not a matter which could be safely left to the decorator or hot-water engineer to diagnose. From whatever source the power is obtained, the dynamo for ordinary requirements is the same, except that it requires to be fitted with a fly-wheel for use with petroleum and slow speed gas-engines, providing the engine has to be run while the lights are used. Where only required for charging the accumulators, this may be omitted, as it wastes power.

The most important features in the dynamo for country-house lighting are:—1. Absence of sparking, which wears out both brushes and commutator; 2, perfect balance of the armature or revolving portion of machine, vibration being one of the causes of what are known as flats on the commutator; 3, strong shaft and wide bearings; 4, good automatic lubrication, the best form being a loose ring revolving in an oil bath; 5, absence of heating, undue heating of the armature and magnets causing unnecessary loss of efficiency. The accumulator is a necessity in every country-house installation, and the position of the room for its accommodation requires careful consideration. For reasonable distances up to 150 yards the engine and accumulator rooms should be placed alongside each other, as the attendant can see that each cell charges up equally, which is essential to success. Where the current is brought from a distance, or where the light will always be supplied from the accumulator alone, a considerable saving can be made in the cost of cables by separating the engine and battery room. There must be no direct communication between the dynamo and cell room, or the cotton insulation will be found to rot off the dynamo after a few years. In selecting a type of accumulator, the main question is absence of attention, which can only be obtained by having the plates well apart, say half an inch, so that any detached portions fall away, instead of bridging across and exhausting the cell. The author considered that a clear space between the plates was also preferable to enclosing them in any form of celluloid bags or wrappings, which soon become clogged with oxides. The use of a registering meter is recommended in the engine room as the best check on the amount of coal, oil, or gas consumed. The engine house should be placed with due regard to prevailing wind, and not less than fifty yards from the main building.

The author next considered the questions of first cost and working cost, giving data applicable to average country house installations, from which also could be determined the class of motive-power to be adopted. Results were also given of a week's recent test with a modern generating plant of a large installation of 2,000 lights. In discussing the lighting of rooms, the author emphasised the necessity of having light and dark portions and, as it were, semi-tones. A room lit equally throughout gives a flat effect, and is neither artistic nor restful. A bright light causes an involuntary contraction of the pupil of the eye, and causes a tired feeling which may ultimately result in eye troubles. The ignorance of electricians concerning this simple fact is probably responsible for the complications ascribed by oculists to the electric light itself. The secret of a restful light is the illumination of a large surface with an absence of any dazzling spots of small area. In a room thus lit the pupil of the eye expands to its full limit, and the weakest eye can read with comfort. To get this result, either the rays must be diffused by transmitting them through a large shade, or reflection must be resorted to, and the direct rays be projected on the walls and ceiling from some hidden source. The illuminated surface is then greater than that of even the largest shades, and the effect more restful. This treatment in the case of light-coloured walls and ceiling is capable of wide adaptation. A combined shelf and picture rail containing a row of hidden lamps for reflected light had been employed by the

\* Abstract of Paper by Mr. Bernard M. Drake, M.Inst.C.E. Read at Royal Institute of British Architects, on the 19th ult.

author, and pretty effects could also be produced with small lamps concealed in the overmantel and in china cabinets.

Coming to the question of fittings in old houses, the existing candle fittings have often to be adapted, as being in accordance with the style of the room. As regards the objection that imitation candles are inartistic, it must be remembered that the designer had the candle in view as the basis of his outline, and without it the proportions are wrong, and the drip cups and other parts meaningless. An incandescent lamp springing direct from a candle socket is a squat abortion that has nothing to commend it. In these cases every effort should be made to get the precise effect of candles without their disadvantages, and as far as possible to conceal the fact that electric light has been employed. Examples were shown of the way in which old fittings may be treated without detriment to their appearance, and attention was called to the economy of shading only the front of lamps placed against a wall, for thus the full advantage of reflection is obtained, and an eight candle-power lamp will take the place of a sixteen candle-power if totally enclosed. There were also shown a few typical fittings made expressly for electric light. Having touched upon the fittest materials for shades, the colours of which should be tested before making a selection; the objections to working the lamps into plaster-work in the ceilings instead of using metal fittings; the precautions to be taken to avoid risk of fire from the heated lamps, the author concluded with some hints on the treatment of the different rooms, passages, and staircases. In adapting candle fittings to a dining-room table the wires are distributed by a patented connector lying under the table centre, and neither the table nor the cloth is pierced. One of the best effects produced by the author was in the dining-room at Chatsworth, where powerful lamps were hidden in reflectors at the base of the pictures all round the room—thus pictures and ceiling were illuminated and the rest of the room remained in repose. In drawing-rooms, which should be brilliantly lighted, the author preferred to light principally from the walls and from standards, as a top light is unbecoming to ladies, causing dark shadows under the eyes. In picture lighting, top as well as base reflectors are frequently necessary with large pictures.

#### CARELESSNESS IN THE MANAGEMENT OF A BOILER.

##### RESULT OF BOARD OF TRADE INQUIRY.

Mr. Macinerney, Q.C., and Mr. Leask, C.E., Commissioners appointed by the Board of Trade, sat on the 12th inst., in Mr. Justice Boyd's Court, and gave judgment on the inquiry into the circumstances connected with the boiler explosion which occurred at the Hibernian Glass Bottle Works, Ringsend, on the 10th of December last, and which resulted in the death of two men.

Mr. Martin, solicitor, appeared for the Board of Trade.

Mr. O'Shaughnessy, Q.C., appeared for Messrs. E. and J. Burke, proprietors of the Hibernian Glass Bottle works.

Mr. Macinerney, Q.C., delivered the judgment on the several questions which they had to determine. In reply to the first question, they found—The boiler was, on the 10th day of December, 1898, provided with the usual boiler fittings. There was no evidence that the safety-valve was efficient. It had disappeared, so that we could not inspect it. In reply to the second question—Was the steam pressure on the same day in excess of what the boiler was reasonably capable of withstanding? they answered "Yes." In reply to the third question, they found that Mathew Smith was not a competent man to have charge of the boiler. He did not and could not have given it the necessary attention. To the fourth question—Was there any competent person employed by

Messrs. E. and J. Burke, Limited, to look after the boiler when it was at work under steam? They replied "No." As to the other questions, they were, with the answers given, as follow:—

5th—Was the boiler under the care of any skilled and competent person for periodical examination?—No.

6th—Was the boiler in an efficient condition for its ordinary working pressure on the day of the explosion?—No.

7th—When was the boiler last examined by a skilled person?—In 1895.

8th—Was the safety-valve of the boiler in proper working order? We think not, for the reason that the evidence showed that the pressure gauge indicated variations ranging from zero to 90 lbs.—without any steam passing the safety-valve.

9th—If not, was the boiler ever subject to excessive strains exceeding the ordinary working pressure?—Yes.

10th—What was the cause of the explosion?—Pressure of steam greater than the boiler could bear.

11th—Were Messrs. E. and J. Burke, Limited, Mathew Smith, Francis Higginson, or either of them, in any way responsible for the explosion?—Messrs. E. and J. Burke, Limited, are responsible for the explosion; Mathew Smith and Francis Higginson are not responsible.

Mr. Macinerney then said:—In answering the last question submitted to us by the solicitor for the Board of Trade, we think it necessary to state briefly the principal considerations which have led up to the conclusion at which we have arrived. It is true, as Mr. O'Shaughnessy said, that companies can carry on a business of this kind only through the instrumentality of servants, but we cannot go with him when he says that when this company put the best man they could get—a man whom they believed to be competent—in charge of these works, that they thereby relieved themselves from all responsibility, legal and moral. The doctrine of "respondeat superior" applies to companies as to individuals, and under the Employers' Liability Act they would be responsible to their own servants for injuries resulting from any defect in the condition of the ways, works, machinery, or plant connected with or used in their business. We entertain no doubt that Charles Campbell was quite competent to manage the general business of the concern, of which the boiler in question was only a small part, but, although it was stated by two intelligent witnesses that he was perfectly conversant with boilers and engines, we find it difficult to agree with them, having regard not only to the explosion but to the course of the evidence. Mathew Smith, who attended to the firing of the boiler on the day shift, admitted that he knew nothing about the mechanical appliances or scientific properties of the boiler when working. Indeed, Campbell stated that he knew Smith was not fit for the work entrusted to him. He dismissed him for unfitness of some sort, and after a short interval reinstated him, from philanthropic motives, no doubt, as has been suggested. John Clarke, who had charge of the boiler on the night shift, did not know at what pressure the boiler could be safely worked. He stated that he got no instructions from Campbell, and he proved that he had not the most elementary knowledge of the manner in which danger from it could be avoided, when to relieve the pressure he loaded the safety-valve instead of lightening it. It was proved that the pressure had gone up at one time to 90 lbs. to the square inch, as indicated by the pressure gauge, and about two hours before the explosion occurred the pressure had gone up to between 50 and 60 lbs. without the safety-valve, which was set to 25 lbs., blowing off. Both these men had other work to perform, and so far as we can ascertain, there was no other person to attend to the boiler, which was worked night and day, except Campbell, who was general manager of the works, in which 120

men and boys were employed. Under these circumstances we find it difficult to believe that Campbell had such knowledge of the danger attending the working of a steam boiler of this description as would enable him to appreciate the peril to which, for a considerable time, his own life and that of all the persons employed in its immediate vicinity were constantly exposed. It may be that he thought no danger was to be apprehended from a small boiler of this kind, which was required to work only at a very low pressure, or it may be that in the interests of the business which he managed he thought he would not be justified in incurring the expense of having a man exclusively employed in taking charge of the boiler. We gathered from an answer given by Mr. William Lawson, the secretary of this company, that that was his view. When asked if the company knew whether their manager had a man in special charge of the boiler, he answered "No; it would be perfectly unnecessary to have one man doing nothing else. It would never have paid." Mr. James Steele, an engineer, who set up this boiler in the works, stated that in his opinion it would be necessary to have a man who understood it always in charge of a boiler like that, and there was evidence that Mr. Little, the former proprietor of these works, always had a man in charge of it who did no other work. We do not feel called upon to lay down any hard and fast rule as to how this boiler should have been managed, especially in the absence of Mr. Campbell, who was the only person who could tell exactly what precautions, if any, were taken to have it worked under reasonably safe conditions. So far as the evidence shows, reasonable precautions were not taken to insure safety. Passing from the question of its management to the boiler itself, portion of which we had the advantage of seeing and examining, we find that the bottom plate was reduced by corrosion to a thinness in many places of less than one-eighth of an inch. That corrosion is manifestly of long standing, and could have been seen by any one who inspected the boiler. We agree with the opinion expressed by the two surveyors of the Board of Trade who examined it, that on the day of the explosion the condition of the boiler was such that it could not be safely worked at any pressure, and that the immediate cause of the explosion was the weak and defective condition of the boiler, for which, as well as for the lax and inadequate manner in which it was managed, we find the company responsible. We find Mathew Smith, whose sole duty in regard to the boiler was to supply it with fire and water, and who was attending to his other work in another place at the time of the explosion and for two hours before it, is not responsible. Neither is Francis Higginson, who appears to be a good and skilful tradesman, and who did all that he was asked to do and more in connection with the boiler, though it was no part of his duty. Having arrived at this conclusion, we are bound to give costs against the company.

Mr. Martin asked for the costs of the inquiry against Messrs. E. and J. Burke.

Mr. O'Shaughnessy, Q.C., said it would be a strong thing to award costs against his clients. The Commissioners had, no doubt, found they were responsible, but he did not think there was any default on the part of the company. What more could they have done than appoint a competent man. The company would do what was just towards those who suffered by the accident.

Mr. Macinerney—I think after the finding we have made we are bound to give costs, but in doing so we will take into account the fact that this boiler was taken over by them with the works; that they, no doubt, assumed it was reasonably safe, and that they entrusted the general management to one who, in the language of their counsel, was "the best man they could get, and who, they had reason to believe, was thoroughly competent and reliable." We also take into account the statement of Mr. O'Shaughnessy that the

company intend to compensate the persons who have suffered by this lamentable accident. We direct that E. and J. Burke, Limited, do pay to the solicitor for the Board of Trade the sum of £40 towards the costs and expenses of this investigation.

### THE ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND.

WE are glad to see some sign of a revivification of the Institute as regards the holding of general meetings and the reading of papers. It is now many years since such took place, as our back volumes will testify, and it is to be hoped that the present and future sessions will be characterised by activity instead of that of dormancy. The sign we allude to is that an announcement has been made that a general meeting will be held on the 26th inst., at their rooms, 20 Lincoln-place, at 8 o'clock, when a paper will be read by Mr. C. J. McCarthy, City Architect, on "Some Intentional Irregularities in Italian Mediæval Architecture."

### THE ARCHITECTURAL ASSOCIATION OF IRELAND.

THE next general meeting of the Association will be held on Tuesday, 24th inst., at the Grosvenor Hotel, Westland-row, when a lecture will be delivered by Mr. William Scott, A.R.I.B.A., on "Egypt, the Cradle of Architecture." The lecture will be illustrated by magic lantern slides. A large attendance is hoped for.

### THE ROYAL SOCIETY OF ANTIQUARIES OF IRELAND.

FIFTY FIRST ANNUAL SESSION.

IN continuation of our notes in issue of 1st inst., the following affords a brief account of what took place at the annual meeting.

In the Report of Council for 1898 it is stated that—

The deaths of seven Fellows, one Hon. Fellow, and twenty-two Members have been notified during the course of the year 1898. The number of names now upon the Roll is 1369—205 Fellows and Hon. Fellows, and 1164 Members. The Fellows who died were—Lord Carlingford, the Earl of Desart, Lavens Matheson Ewart, Harold Frederic, Herbert Webb Gillman, Sir Stuart Knill, Bt., Rev. Samuel Martin Mayhew, and Sir J. T. Gilbert. Among the Members, the Society has lost the Rev. George Thomas Stokes, D.D., who, at the time of his death, and for several years, was a Member of the Council. Dr. Stokes was elected a Member of the Society in 1887, and the following Papers by him were published in the *Journal*:—"Dudley Loftus: A Dublin Antiquary of the Seventeenth Century"; "Athlone in the Seventeenth Century"; "Killegor Church, Co. Dublin"; and "Island Monasteries of Wales and Ireland," all of which appeared in vol. i., 5th Ser. (1890-91); "St. Fechin of Fore, and his Monastery," vol. ii. (1892); "The Antiquities from Kingstown to Dublin," vols. iii. (1893) and v. (1895); "St. Hugh of Raheny: his Church, his Life, and his Times," vol. vi. (1896). A Memoir of Dr. Stokes appears in the Preface to the *Journal* for the Society for 1898. The Vice-Presidents who retire by rotation at the Annual General Meeting for 1899 are—Colonel Vigors; Mr. Milligan; the most Rev. Dr. Sheehan, Bishop of Waterford and Lismore; and Dr. Frazer: and the following have been duly nominated:—For Leinster, Lord Walter FitzGerald; for Ulster, the Rev. Dr. Buick; for Munster, the Rev. Edmund Barry, P.P., M.R.I.A.; and for Connaught, the Most Rev. Dr. Healy, Bishop of Clonfert. Mr. Cochrane, after many years of labour which has resulted in the Society taking the leading position it now proudly occupies, has desired to be relieved from the office of Honorary Treasurer. The Council cannot

allow the opportunity to pass without recording their full sense of the importance of the work of Mr. Cochrane, and calling upon the Members to give him a hearty vote of thanks. Most fortunately for the interests of the Society, Mr. Cochrane will still occupy the position of Honorary General Secretary to the Society. Mr. F. Elrington Ball, M.R.I.A., Member of Council, has been nominated as Hon. Treasurer. Mr. John Cooke, M.A., and Mr. James G. Robertson have been re-nominated as Auditors of the Treasurer's Accounts. The financial condition of the Society is satisfactory, and the Auditors' Report will be brought forward in accordance with Rule 20 in due course. The Society having entered on the fiftieth year of its existence, the event was celebrated by a Banquet held in the Antient Concert Rooms, Dublin, on Wednesday, the 15th of June, to which a large number of invitations were issued to distinguished persons and representatives of the more important kindred Societies. The Council have entered into the possession of new premises at No. 6 St. Stephen's-green, and have given up the rooms occupied for the last six years at No. 7. In the new premises there is sufficient accommodation to hold the usual Meetings, and provide for the Library and other property of the Society. Notice to surrender the premises hitherto rented by the Society in Kilkenny has been given; and in case the collection of the subjects of Antiquity cannot be adequately housed and cared for locally, to the satisfaction of the Council, they are prepared to have them transferred to the premises of the Society in Dublin, which are suited for their reception. It is well known to all students of the Antiquities of Ireland that, on the passing of the Church Act (Ireland), 137 of the Ancient Monuments of Ireland were vested in the Board of Works (Ireland). Under the Ancient Monuments Acts of 1882 and 1892, some 48 more became vested in the Board. Many matters of difficulty in connection with the preservation of these Monuments were constantly arising; some of them entailed subjects about which there was a great deal of controversy; and there was a very great notion abroad that it was desirable that some of the Irish Antiquaries should be consulted before repairs or restorations were undertaken by the Commissioners of the Board of Works to Irish Monuments. The Chairman of the Board of Works proposed (1892) to your Society, and to the Royal Irish Academy, that each body should appoint two representatives who, with a Commissioner of the Board of Works, should be a Committee to meet monthly and consult with the Superintendent of Ancient Monuments before any more Monuments were scheduled or repairs or restoration effected on those at present scheduled. Fully alive to the importance of such a consultative Committee, your Society at once selected their then President, Mr. Thomas Drew, and Dr. E. P. Wright to represent your Society, while the Royal Irish Academy Committee selected Lord Walter FitzGerald and the late Rev. Denis Murphy, S.J., as their representatives. Since then, Dr. La Touche has been selected to fill Mr. Drew's place, and Mr. J. Ribton Garstin has been selected by the Royal Irish Academy Committee to fill the vacancy caused by the death of the Rev. D. Murphy. From reports made to your Council from time to time, they are inclined to think that, as a Committee of Advice, this Committee fulfils a very useful part, and they have reason to believe that every consideration has been given to the labours of the Committee by the Commissioners. A list of the Monuments scheduled under the advice of the Committee from their appointment up to this date is in preparation.

The following candidates were recommended by the Council for election.

As *Fellows*—Francis Elrington Ball, Dundrum; Charles Herbert Black, New Zealand; Rev. Richard Barry Doyle, Ohio, U.S.A.; Francis Edward Kearney, Limerick; Arthur V. Macan, Dublin; Henry Arthur Shuckburgh Upton, Westmeath.

As *Members*—Thomas Bodkin Costello; J. P. Dowdall, Mullingar; Edward Eagle, Dublin; Peter FitzGerald, Limerick; Kirkwood Hackett, Dublin; Frederick J. Hicks, Dublin; George Hingston, Dublin; Myles De Exeter Jordan, Castlebar; Captain Kingscote, Macroom; Rev. Thomas Lawlor, P.P., Kilorglin; Librarian, St. Patrick's College, Maynooth; John M'Connell, Belfast; L. Malone, Monkstown; Mrs. Malone, Monkstown; Mrs. Nichols, Cork; Frank Marshall James Sellens, Raheny; V. J. Hussey-Walsh, London; Richard D. Walshe, Dublin; Chas. Cecil Yedham, Clare.

### BOOKS RECEIVED.

*Cabinet Making for Amateurs: A Practical Handbook on the Making of Various Articles of Furniture.* By Various Hands. Edited by John P. Arkwright. London: L. Upcott Gill, Strand.

THIS, the latest of a series of "Handbooks for Amateur Mechanics," which have issued from the press of Mr. L. Upcott Gill, will be found a useful Manual for Amateurs in Cabinet-Making as well as for carpenters and others. The work consists of 200 pages of well-arranged matter, with 355 sketches and diagrams, executed in the best style. We are highly pleased with its get up in every respect, and congratulate the publisher on his creditable production, and prophesy a large sale for it, at the low price (2s. 6d.) put upon it. In his brief preface, the editor writes:—"How far it may succeed or fail, time and the public will show; but, at any rate, the fact will remain that within its covers will be found sufficiently full instructions for anyone who is not an absolute novice at carpentry work to construct a considerable number of useful and ornamental articles. Some of them, no doubt, are not, strictly speaking, 'cabinet work,' but they have been considered to be sufficiently near to it to be included in this volume." The work before us is a good sample of the typographic art."

*The Journal of the Royal Society of Antiquaries of Ireland, for Quarter ending December, 1898.* Dublin: Hodges, Figgis and Co.; London: Williams and Norgate.

THE Part of this *Journal*, now to hand, contains a large array of articles of an interesting nature to the Antiquary as well as to the general reader. From the pen of Lord Walter FitzGerald we have a paper on "Walter Reagh FitzGerald, a Noted Outlaw of the Sixteenth Century." Walter Reagh's mother, he tells us, was Honora O'Toole, of a family then seated at Powerscourt, in the County Wicklow. Her Will is dated 6th of October, 1615, and was proved in the following year; she was buried by the side of her husband, Maurice, in the Cathedral Church of Kildaro.

A paper of local interest—"Mount Merriion and its History," by Mr. F. E. Ball—extends to sixteen pages of the *Journal*, and will, doubtless, be closely scanned; it is copiously annotated, and will take much time in reading carefully. It is accompanied with three views of Mount Merriion.

The next paper of importance is by Mr. T. J. Westropp, and is entitled "Prehistoric Remains in the Burren, County Clare (Carran and Kilcorney)." This paper extends to fourteen pages, and is accompanied with one plate and eight illustrations drawn by the author.

This is succeeded by a paper by Mr. J. W. Knowles, on "Irish Flint Scrapers," extending to twenty-six pages, with fifteen illustrations. The author winds up his paper with the following summary:—"We have seen that scrapers are a class of implement which is much more abundant than was generally suspected. That the parts dressed for scraping were made, in general terms, long, rounded, and narrow. From finding the Eskimos using similar imple-

ments in the dressing of skins, it is probable that the majority of our scrapers were similarly employed; and other stones besides flint were probably used for scrapers in parts of Ireland where flint is not found. The nature of the injury to the edges of some which show signs of use would lead us to infer that in some instances they had been employed in scraping hard substances like stone, probably hæmatite and chalk, for paint. Stones of this material, with coarse striae, being found around the hut sites at Whitepark Bay in association with flakes and scrapers, makes this idea very probable. That scrapers were ever used with pyrites or steel for the production of fire is certainly not proven. It is more likely that the method of producing fire by the friction of two pieces of wood was in use in the Stone Age, and that a scraper would not be neatly dressed in order to be used to produce fire when an undressed flake would answer the purpose fully as well. The pyrites found in association with scrapers in graves, as now exhibited in the British Museum, is oxidised, and, instead of being used for the production of fire by percussion, was more probably intended as a means of producing paint, that the deceased person might appear properly adorned in the Spirit world.

On "Ogam Inscriptions" we have three papers—one by Rev. G. R. Buick; another by Mr. Robert Cochrane, with five illustrations; and one by Principal Rhys. These will be found useful to students in that peculiar line.

### TENDERS.

For the construction of works in connection with the supply of water to the town of Schull, for the Guardians of the Union. Mr. Richard Evans, C.E., Cork, engineer:—

J. White .. ..	£891 19 6
A. W. Smith (accepted) ..	795 0 0
Engineer's estimate, £811 18s.	

For sewerage and waterworks at Glen-garriff, for the Guardians of the Bantry Union. Mr. Richard Evans, C.E., en- gineer:—

W. J. Murphy (accepted) ..	£295
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### MISCELLANEOUS.

**AWARD UNDER THE WORKMEN'S COMPEN- SATION ACT.**—At Downpatrick Quarter Sessions, on Saturday, James Jennings, labourer, was awarded 17s. a-week for life under the provisions of the Workmen's Compensation Act, for the loss of both eyes in an explosion of dynamite at Belfast Water-works.

**CANTERBURY CATHEDRAL.**—Bronze altar rails have been placed in the sanctuary of Canterbury Cathedral, to take the place of the oak structure hitherto in use. Three tons of brass have been used in the manufacture of the rails, and they present a very massive appearance. The rails are surmounted by broad moulded continuous capping, and laid on a plinth of Belgian black marble. The work was designed by Sir Arthur Blomfield, and is in English Early Renaissance style.

**OLD ENGLISH AND IRISH SILVER.**—About 7,000 ounces of silver were dispersed under the hammer at Debenham, Storr, and Sons' rooms in Covent-garden, when the following high prices were realised:—A Queen patent, 31s. per ounce; a silver sugar vase and cover, 48s. per ounce; a set of three caddies, 31s. per ounce; a Queen Anne teapot, £3 per ounce; a silver, 28s. per ounce; a fluted porringer, 60s. per ounce; a Charles II. wine cup, 72s. per ounce; a William and Mary pint cup, 40s. per ounce; a curious porringer, temp. Charles II., 68s. per ounce; a brilliant and gold snuff-box brought £79; another, £50; an enamelled gold box, £18 10s.; a pair of paste buckles, £7; and a seal top spoon, £10.

**POSTAGE ON PRINTED MATTER.**—The editor of the "News," in a letter to the "Daily Chronicle," draws attention to the anomalies of the General Post Office in dealing with printed matter. He says that 35,000 packets of "Home Words" were recently posted, each weighing 6oz., the postage for each packet being 1½d., and at the same time he received a copy of a lady's paper, weighing 2 lbs. 6oz., the postage of which was only one halfpenny.

The 35,000 "Home Words" weighed about 6 tons, and cost £218 15s. to post; whereas 35,000 copies of the lady's newspaper would weigh about 37 tons, and the postage on them would be only £72 18s. The Postmaster-General's attention has been drawn to this matter several times, but no advance has been made. In our own case, we have to pay letter rate, 1½d. postage, on each copy of the "Sales and Wants Advertiser," the weight being under 6oz., because it does not come under the class of matter termed newspapers. We consider that trade journals are of even greater importance to the commercial community than ordinary journals are to the general public, and they should at least have the same advantage in postage, especially as trade journals bring so much more business to the Post Office, in the way of letters, than ordinary periodicals do.—*Sales and Wants Advertiser.*

**THE HIGH ALTAR SCREEN, ST. ALBANS ABBEY.**—At times of late snatches of information have been given regarding the famous High Altar Screen in the venerable Abbey at St. Albans, and the circumstance that a faculty has been obtained without opposition, for the completion of the work, has renewed interest in this matter. The particulars of this week place before readers of the "Herts Advertiser" will be welcomed. In view of the early completion of this sumptuous and admittedly finest specimen of fifteenth century medieval stonework in all Christendom, an important meeting took place in the Abbey on Thursday. The Right Hon. Lord Aldenham, of Aldenham, on that occasion met the Lord Bishops of St. Albans and Colchester. His Lordship, we may state, was accompanied by the Rev. the Hon. Kenneth F. Gibbs and the Hon. Miss Gibbs. There were also present, the Ven. Archdeacon of St. Albans and Mrs. and Miss Lawrence, Mr. Alfred Gilbert, R.A., the eminent sculptor; the Bishop of St. Albans' Chaplain (the Rev. H. E. Burrell), and Sir Arthur W. Blomfield, A.R.A., the well-known architect, under whose direction the screen was so successfully restored by Mr. Harry Hems, of Exeter, at a cost of some £10,000, through the munificence of Lord Aldenham. Mr. Hems, too, was present. The details of the faculty obtained some time back by Lord Aldenham for the completion of the screen, were fully discussed, with the result that Mr. Harry Hems was finally instructed to proceed with his part of the work, in conjunction with Mr. Alfred Gilbert, R.A. It is therefore reasonable to assume that this grand old masterpiece of William Walsingham's—his inimitable retable—will, in the year of grace 1899, once again assume, in its entirety, all its ancient glory, and become what it originally claimed to be, namely, the wonder of the whole world.

**THE USES OF PAPIRISTITE.**—According to the United States Consul at Zurich, a new artificial stone or moss has recently made its appearance on the builders' technical market called papyristite, on account of the ingredients entering into its composition, principal among which is purified paper pulp, obtained from waste paper. Papyristite is an improvement on papyrolith, both having been invented by M. F. Gehre, a civil engineer of Zurich. It can be used in various ways, but is specially intended to serve as a solid, impermeable, and jointless roof or floor, which when once laid will present a smooth surface as if made in one continuous layer. This new material is stated to be a non-conductor of heat, cold, or sound, and, although as hard as stone, has a soft linoleum-like feeling to the foot, and is noiseless. Accumulations of dust, vermin, or fungi, are impossible, there being no grooves or joints. The weight is much less than that of stone or cement. One hundred kilogrammes (220 lbs.) of this preparation in a powdered form, when mixed and spread to a thickness of 10 millimetres (.3940 inch), will cover a surface of 8½ square metres (91½ square feet). No machinery is necessary to prepare the compound, although, to save labour, when great quantities are to be used, an ordinary press can be utilised to advantage. It can be moulded or spread in any form or shape, as is the case with cement, the mixing is done on the spot where it is wanted, and it is transported like cement in barrels or sacks. The drying or hardening process is effected in twenty-four hours after spreading, and then if desired it can be polished to a high gloss. The inventor's numerous experiments have given good results, and his persistent efforts seem at last, it is said, to have been crowned with success. Taking the opinion of prominent architects who have experimented with the new material, there seems to be no doubt that a valuable building material has been discovered which can be utilised in many ways. It is as hard as marble and practically indestructible, yet it is elastic and possesses all of the qualities mentioned above. It can be cut, sawn, and bored, given any desirable tint, and made to look like marble or mosaic. For roofing

purposes it is also valuable. A light iron frame-work has been invented by Mr. Gehre, and the material is put on in the form partly of plates and partly of mortar, which when united produce a smooth continuous surface. It is adapted to cold as well as to tropical regions, and its stone-like qualities protect it against mice or other vermin. Trials of this material have been made in Russia and Brazil, and the reports received are said to be very encouraging. The material once laid will never contract or warp, and it is elastic, light, and inexpensive in production. For school-rooms, public halls, corridors, bath rooms (both floor and walls), terraces, barns, poultry yards, &c., this material can be used, and as a non-absorbent of moisture, filth, or other unhealthy substances, it is said to be without equal as a building material.—*Jour. Soc. Arts.*

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## THE IRISH BUILDER.

VOL. XLI.—No. 939.

SOME  
INTENTIONAL IRREGULARITIES IN  
ITALIAN  
MEDIÆVAL ARCHITECTURE.\*

IN these days when we have a superabundant technical and professional Press and a teeming literature, or, at all events, an enormous output of books dealing with every possible branch of Architecture, it would be presumption on my part to address you at all unless I had something novel or interesting to tell you. And it is just because I have something which I hope—which I venture to believe—would prove interesting to a portion of my audience at all events,—that I am here this evening. In saying this, I wish it to be clearly understood at the outset that I make no claim whatever to originality on my own part. The discoveries (and I cannot call them anything less than discoveries) which I wish to bring under your notice are not my discoveries. I have made no investigations, no original research; I cannot even claim to be very intimately acquainted with the subject on which I am about to speak to you; but it is a subject which has interested and, I may say, fascinated me, and it is a subject which I venture to hope will interest you.

These discoveries to which I have referred are not, as I have said, my discoveries—they are the discoveries of an American architect, Mr. W. H. Goodyear. I have not the privilege of knowing Mr. Goodyear, but I am told that, besides being a distinguished architect, he is a highly-cultured scholar, and an Antiquary. I mention these facts in order that I may secure for Mr. Goodyear's views your respectful consideration, even if you cannot always agree with him in the conclusions which he draws.

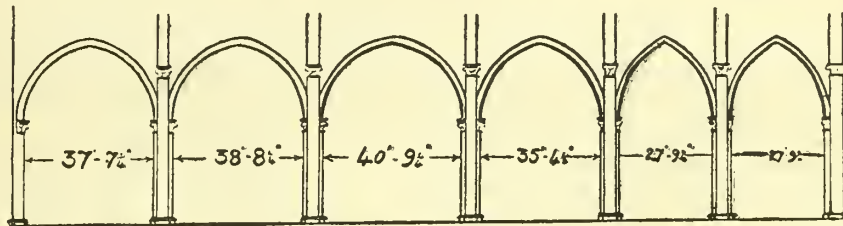
We, who live in the old world of Europe, are so accustomed now-a-days to look towards America for new inventions in the field of physical science, and for the most recent improvements in applied mechanics, that it would not at all surprise me to find an architect from the new world coming to us with some fresh scientific discovery, or some novel application of it to Architectural construction; but I think it cannot fail to surprise us when we find the practical and hard-headed American quitting his own field of enterprise and entering with distinction upon that of mediæval European archæology. And yet this is precisely what Mr. Goodyear has done. Surely we might have expected that if indeed the Mediæval Architecture of Europe needed any further investigation, or held any secrets not yet revealed—surely, I say, we might have expected that these investigations would have been undertaken by the architectural or archæological societies of the old world, to whom the honour of these discoveries would in that case have belonged.

I must now try to give you a very brief account of Mr. Goodyear's investigations, and of the conclusions at which he has arrived.

In the year 1870, while spending a holiday in Italy, Mr. Goodyear noticed for the first time "certain phenomena" (to use his own words) in connection with the Cathedral of Pisa and other churches in the same city. After spending a considerable time in the study of these "phenomena," he came to the conclusion that (again to use his own words) "it was quite impossible they could have developed and disappeared in a single

town." For five-and-twenty years, however, he had no opportunity of extending his observations; but, in 1895, by the co-operation of the Brooklyn Institute of Arts and Science, he was enabled to make a systematic examination of a large number of churches in Northern and Central Italy. In this examination, which lasted over five months, he was assisted by Mr. McKecknie, a skilled surveyor and photographer. The result of these investigations was to establish, beyond I think the possibility of doubt, the existence in Italian Mediæval Architecture of a whole series of more or less well-defined

very few examples of which I can speak from personal knowledge. In this church there is a diminution in pier spacing of the nave arcade from the west end to the choir of nearly 10 ft. This diminution, however, it is but right to say, is not uniformly progressive. On the contrary, the second and third bays from the west end are slightly wider than the extreme western bay, so that the diminution in the width of the fourth, fifth, and sixth bays is extremely rapid. (This will be seen by a reference to the diagram which I have copied from Mr. Goodyear's article.) But in reality this increase in the



S. MARIA NOVELLA, FLORENCE.

irregularities which are not, and cannot possibly be the result of accident, or carelessness, or mere whim on the part of the architect or builder. When a proposition of this kind is advanced for the first time, it is, of course, and very properly I think, sure to meet with doubt and opposition—I say that this is a proper attitude to adopt towards any novel proposition, because, when we approach the investigation of a scientific question, it is right that we should do so in a spirit of scepticism rather than in a spirit of blind unreasoning faith. I am not going to ask you, therefore, to accept anything on trust, except the facts and measurements which Mr. Goodyear has given us; and these we must accept on his word, unless, indeed, we are in a position to repeat his investigations for ourselves, and to check his measurements.

These intentional irregularities, whose existence Mr. Goodyear has established by actual surveys and measurements, may be roughly divided under two heads, namely:—(1st) Perspective illusions; (2nd) Optical refinements other than perspective illusions. This classification I must admit is not a very orderly or systematic one, but it is difficult to be orderly or systematic in dealing with phenomena, which at first appear to defy all order and system, and about which our knowledge up to the present is extremely limited.

Let us consider now, in the first place, the Perspective Illusions. These are mostly, but not altogether, confined to interiors, and consist of attempts to produce an increased appearance of length or distance, and consequently an increased effect of size, by methods very similar to those adopted by every theatrical scene-painter to-day. It is not possible for me to enumerate all these methods, but I may instance a few of them:—The dropping of the arches of the nave arcade from the west end or principal entrance towards the choir; the diminution of the spaces between the columns, in the same direction; the upward slope of the floor in the same direction, and, where transepts exist, the dropping of the further or more easterly of the main arches which span the nave at the intersection of the transepts.

In one of a series of articles published (1896 and 1897) in an American Architectural magazine, Mr. Goodyear mentions a very large number of churches in which he found Perspective Illusions, and he gives illustrations and measurements in each case. Time will not permit me to go into all these, but I may mention a few notable examples in which one or more of these Perspective Illusions exist. The first of these is the well-known Church of Santa Maria Novella, at Florence. I mention this example first, partly because the church itself is so well known, and partly because it is one of the

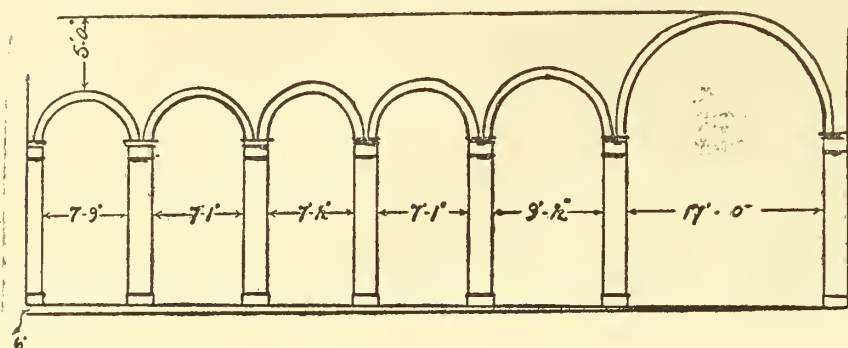
span of the second and third bays with the consequent rapid diminution in the remaining bays, only strengthens Mr. Goodyear's argument as to the Perspective Illusion. For although in this one case (and in this case only, so far as I am aware), the discrepancy in the spans of the nave arcades had already been noticed by Burckhardt, and copied from him, no doubt, into Baedeker's Guide to Northern Italy, yet so complete is the illusion that a plan of this church has actually been published (in Reynand's "Traité d'Architecture"), in which the spans are shown of equal width. This, no doubt, must appear an astounding statement, but it so happens that my own personal experience confirms it so far, at least, as regards the completeness of the illusion. When I visited Florence in 1894, I had not seen or heard anything of Mr. Goodyear's observations—they had not in fact been published at the time—and, although I spent a great many hours in the beautiful Church of Santa Maria Novella, it is not at all surprising that this irregularity in the bays of the nave arcades should have escaped my notice. But even when I visited Florence again in the autumn of 1897 (after I had read the article in the "Architectural Record," in which these facts are mentioned), it was only by careful observation that I was able to detect any irregularity in the pier spacings, and even then I could not believe that it amounted to anything like what Mr. Goodyear's measurements had shown it to be. The second example I shall mention of this particular method of producing Perspective Illusions, is the Church of San Stefano, at Pisa. Here the diminution in width of the nave arcades from the west end to the choir amounts to exactly 10 ft., and in this case the widest span is in the extreme westerly bay. This bay is nearly 8 ft. wider than the next, but from the second bay onwards the diminution is very gradual. This church affords us also examples of two other methods of producing Perspective Illusion, and is therefore particularly interesting. I refer to the dropping of the arches of the nave arcade in the direction of the choir, which here amounts to 5 ft., and also to the upward slope of the pavement, amounting to 6 in.

Further examples of Perspective Illusions of these several kinds are to be found in the Cathedral of Fiesole, near Florence; the Church of San Pietro, at Lucca; and the Church of San Giovanni, at Viterbo.

But I must content myself with merely mentioning these, and pass on to the fourth method of producing Perspective Illusions, namely by the dropping of the further of the arcades which span the nave at the intersection of the transepts.

I shall mention only two examples of this method:—One is to be found in the famous

\* By Mr. C. J. MacCarthy, F.R.I.A.I., City Architect. Read before Royal Institute of the Architects of Ireland, on the 26th ult.



S. STEFANO, PISA.

Cathedral of Siena, where the further of the two arches is 5 ft. lower than the nearer; the other is in the hardly less famous Cathedral of Pisa, where the drop is 3 ft.

Now, before I pass on to the second class of Intentional Irregularities, I wish to make sure of the ground over which we have just travelled. I hope I have convinced you by the examples I have cited of the existence of Irregularities of the first class (those which I have called Perspective Illusions), and I think it must be obvious to anyone who has even the most elementary knowledge of perspective, that whatever the object of these Irregularities may have been, their effect, beyond all question, is to enhance the apparent size of the building in which they are found. Here I shall leave this question for the present, but only to return to it bye-and-bye. And now let us consider the second class of Irregularities, those which I called optical refinements.

The examples of these Irregularities are very numerous and remarkably striking; but they are so various, so whimsical, if I may use the word, that I find it impossible to classify them. I may, however, remark that they are to be found in churches where Perspective Illusions are absent, as well as those in which they are present. These Irregularities exist in the elevations, both internal and external, as well as in the plans, but by far the most striking examples are to be found in the plans, and I shall therefore confine my remarks almost entirely to these.

Here, for example, is the ground plan of the Church of Santa Chiara at Assisi. The Irregularity is not very obvious even in the diagram, and is of course altogether imperceptible in the building itself, and yet the deflection to the south amounts to 5 ft. 2½ in.

Another example is the Church of San Nicola, at Bari, where the obliquity (also to the south) is upwards of 8 ft.

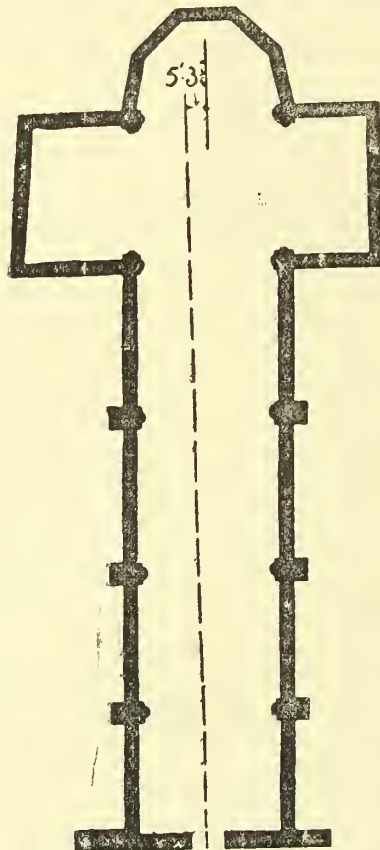
A third example is the Cathedral of Ruvo. Here the obliquity (again to the south) is exactly 8 ft.

A fourth example is the Church of San Giovanni, at Viterbo, where the deflection (still to the south) is 4 ft. 11. This last is a very remarkable example, for, in addition to the obliquity of the plan, the wall on the north side is 6 ft. 8 in. longer than that on the south side.

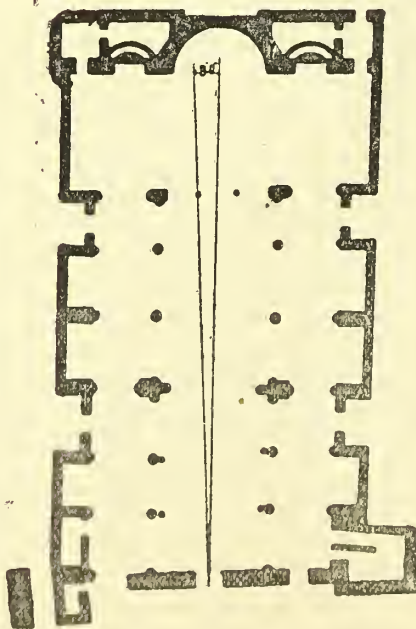
These are the only examples which I can illustrate by diagrams, but I may mention a few others of the many enumerated by Mr. Goodyear. For instance, the Church of San Bartolomeo, at Rome, the Cathedral of Orvieto, the Cathedral of Cremona, the Church of San Pietro, at Assisi, and the Cathedral of Troja.

The Irregularities in the elevations are also remarkable, and good examples may be seen in the elevations of the nave arcade of Santa Maria Novella at Florence, and San Stefano at Pisa, which I have already shown you. I need not, however, dwell on these at present, but later on I shall have to refer to them again. I have already said that the effect of these irregularities of the second class was not obvious at first sight, but I think that a little consideration will incline us to believe, and ultimately force us to admit, that to them is due, in a very large measure, the variety, the freshness and, if I

may so say, the appearance of life which never fail to charm us when we view with a



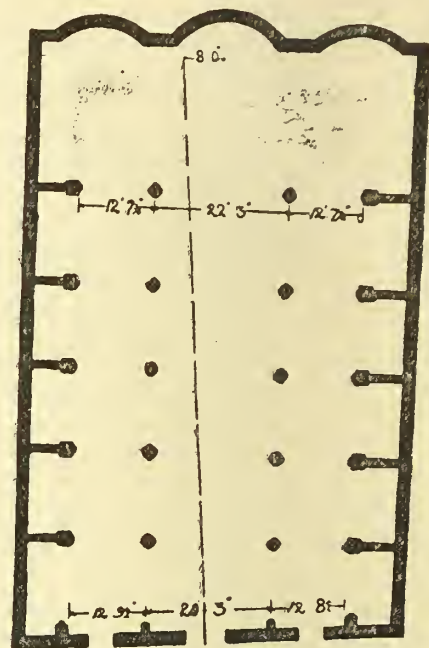
S. CHIARA, ASSISI.



S. NICOLA, BARI.

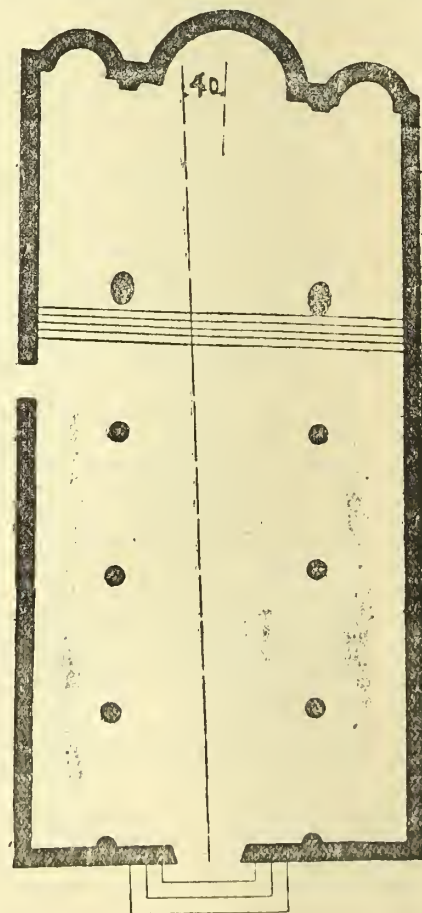
seeing eye these monuments of the Middle Ages. And, if I am right in this, may not the absence of these irregularities largely

account for the tameness, the monotony, and the want of life that, to my mind at least, are, I regret to say, the principal characteristics of almost all modern work? In saying this I may appear to be taking an extreme view, and perhaps and unpopular one. But, after all, if we come to question ourselves on the point, must we not admit



CATHEDRAL OF RUVO.

that (our own works of course aside) there is not in modern architecture that variety, that movement, that "life," in fact, which greets us everywhere in the work of the mediæval architects? But, whatever divergence of



S. GIOVANNI, VITERBO.

opinion may exist among us as to the merits or demerits of modern work, there is, I think, but little room for difference as to the beauty and the charm of Mediæval Architecture, whether it is the beautiful Mediæval Architecture of Northern Europe, or the

scarcely less attractive Mediæval Architecture of Italy. This view which I have put forward as an explanation of the charm and sense of life in mediæval work—namely, the conscious and intentional irregularity of plan and elevation as well as of detail—is not altogether novel. But what I do claim is, that it has never before been put forward with the same weight of positive evidence at its back. Hitherto it was but a conjecture, a hypothesis, but Mr. Goodyear has established it as a fact.

Speaking of the irregularities of the front of Pisa Cathedral (which itself forms a subject of one of Mr. Goodyear's articles, but to which I have purposely avoided all reference, for the subject would require an evening to itself), Mr. Ruskin says:—"How great, how frequent they are (that is, these irregularities), and how brightly the severity of architectural law is relieved by their grace and suddenness, has not, I think, been enough observed; still less the unequal measurements of even important features professing to be absolutely symmetrical." "I am not," he goes on to say, "so familiar with modern practice as to speak with confidence respecting its ordinary precision, but I imagine that the following measures of the western front of the Cathedral of Pisa would be looked upon by present architects as very blundering approximations." And then he gives a series of measurements with which I need not trouble you, and he adds "There is no look of slurring or blundering about it; it is all coolly filled in as if the builder had no sense of anything being wrong or extraordinary. I only wish we had a little of his impudence." And then, after discussing further Irregularities, further departures from what he calls the severity of architectural law, he boldly proclaims "Now I call that Living Architecture."

And now, gentlemen, if I have proved to you, in the first place, the existence of these two classes of Irregularities in the mediæval churches of Italy, and if I have further been able to convince you that, as regards the first class of these Irregularities, the effect is unquestionably to enhance the apparent size of the building, and that to the second class must be attributed in part, at least, that charm of variety and "life" which is one of the most striking attributes of the architecture of this period, I think I shall have but little difficulty in carrying you with me one step further, and of establishing beyond the shadow of a doubt that these Irregularities cannot possibly be the result of chance or accident, or of anything else than intention and design.

But in saying this I wish you to distinctly understand that I refer only to the Irregularities which I have attempted to describe, and to certain other Irregularities which Mr. Goodyear has detailed, but which I am unfortunately unable to bring under your notice this evening; and I do not for a moment deny that there are to be found in Italian Mediæval Architecture many other Irregularities, which cannot be attributed to intention, but which are due to rough and careless building, and, more frequently, to the use of heterogeneous materials from ancient classical buildings. But I maintain that these Irregularities of which I have been speaking this evening, do not come into this category. As regards Perspective Illusion, I think the evidence of intention or design is obvious. If we had but one example of the diminishing bays of the nave arcade, or of the dropping arches, or of the rising floor, or of the drop in the arches at the crossings of the transepts, that might be an accident; but when we have a whole series of similar Irregularities occurring over and over again, it is quite impossible to believe that they are the result of an accident. How is it possible that careless work or the use of heterogeneous materials could produce results such as these?

It is true, of course, that in many of the churches which I have mentioned as examples of Perspective Illusions, there are very striking departures from what I may

call the Perspective scheme or system, as in the Church of Santa Maria Novella, at Florence, where the second and third bays are actually wider than the first or extreme western bay; and again in the Church of San Stefano, at Pisa, where the second bay is 8 ft. narrower than the first, and there is a diminution of but 2 ft. in the remaining five bays. I confess that at first these departures from the Perspective scheme caused me much trouble, and appeared to go far towards wrecking the whole theory of a Perspective scheme—they were in fact my only stumbling-block. But when we view them in the light which we have gained by our consideration of what I call the second class of Irregularities, I think we shall have but little difficulty in accounting for them. If, as I contend, these Irregularities were introduced for the purpose of giving to a building the charm of variety and of interest, and that sense of life of which I have already spoken, why should it surprise us more to find them in a building where a Perspective scheme exists, than to find them in a building where no such scheme exists? Or, in other words, why should such an Irregularity in, say, a nave arcade arranged on a Perspective plan be more surprising than a similar Irregularity in a nave arcade arranged on a geometrical plan? In either case, it is, we must admit, a departure from the regular plan, whether that plan be a Perspective plan or a geometrical plan, and in either case its introduction can only be justified on the ground of enhanced effect. But in neither case is it possible, if we only consider the matter carefully, to found upon its introduction an argument against an intentional and deliberate scheme of Perspective Illusion.

I have next to consider the question of design or intention in the case of Irregularities of the second class; and if I had found it possible to show you a larger number of examples of this class, my task would have been an easier one.

I must now direct your attention again to the plan diagrams on the wall. The first of these, you will remember, is Santa Chiara, at Assisi, in which the deflection in the length of the nave and choir amounts to 5 ft. 3½ in. We might, at first, be disposed to consider this as merely an accident due to carelessness or want of skill on the builder's part, but when we find, as Mr. Goodyear tells us, that "the widths of the church are identical to the hundredth part of a foot at the façade and at the transept," or, in other words, that in spite of the deflection of over 5 ft., the side walls are absolutely parallel, I think the theory of carelessness or want of skill must fall to the ground.

Next let us take the Church of San Nicola, at Basil. Here we have an obliquity in the plan of no less than 8 ft., and again we find the side walls parallel. But look at the irregular spacing of the columns towards the western end of the church—can that be accidental?

Now listen to what Mr. Goodyear has to say about this example, which he calls "an impregnable case of constructive symmetry." "The side walls," he points out, "are broken by recesses for side doors at two points on each side, and yet the continuity of the obliquity is unbroken in the main exterior lines. Incredulity as to constructive purpose, in face of this plan, is either the result of stupidity or of wilful indifference."

Now take the plan of the Cathedral of Ruvo, where there is a deflection of exactly 8 ft. to the south, and at the same time the utmost regularity throughout almost all the rest of the plan, for although the nave is two feet wider at the choir than at the western end, the widths of both the aisles correspond with a remarkable degree of accuracy. Here are the figures:—North Aisle, width at west end 12 ft. 5½ in.; South Aisle, width at same end 12 ft. 8½ in. (or a difference of only one inch); North Aisle, width at east end 12 ft. 7½ in.; South Aisle, width at east end 12 ft. 7¼ in. (or a difference of exactly quarter of an inch.)

How, I ask, is it possible to believe that accuracy such as this should be found side by side with such an inaccuracy as a deflection 8 ft. in the length of the church, except the latter was intentional?

Now let us look at my last diagram. It is the plan of San Giovanni, at Viterbo, with a deflection in the centre line of 4 ft. 11 in. to the south, and the side walls are oblique to the façade in the same direction, although they are not parallel. But the most remarkable irregularity in this plan is, as I have already mentioned, that the wall on the north side is 6 ft. 8 in. longer than the wall on the south side. And now I will ask your attention to what Mr. Goodyear says on this particular point. Here are his words:—"To show that this is not accidental, we have only to examine the pier-spacings of the nave, with the exception of the bays next the entrance, where the discrepancy is only 22-100th of a foot in the other direction, every bay on the left (*i. e.*, the north side) is wider than the corresponding bay on the right or south side. This proves that the extra length of the north wall and the consequent obliquity of the apse wall, as compared with the façade, belong to the original "plan of the church."

Another argument put forward by Mr. Goodyear in favour of the theory of intention or design in the case of oblique plans, is the fact that he has been unable to find a single instance in which both the side walls form an obtuse angle with the front; it invariably happens that both the walls are oblique in the same direction.

With regard to the effect of these oblique plans on the eye of a person within the church, Mr. Goodyear makes some interesting remarks:—"Strange and extravagant," he says, "as they appear on paper, there is not one of them which does not keep inside the limit of conspicuous Irregularity."

"In the buildings one simply has a picturesque result; you think yourself at the side when you are really at the centre, and *vice versa*. Your point of view is changed, or confused, or doubted, but you are not aware of anything Irregular until the measurements are taken."

Now, gentlemen, I do not propose to pursue this line of argument further; but before I conclude my remarks on the Irregularities of Italian Mediæval Architecture, will you permit me for a moment to remind you of the well-known Irregularities which have been discovered in the ancient Architecture of Greece.

You are all of course familiar with the entasis on the columns of the Parthenon and other temples, and with the inward lean of the columns themselves and of the walls; although strange enough even these were completely ignored by Stuart and Revett, who measured the whole of the Parthenon in 1756, and were in fact absolutely unknown until discovered by Mr. Cockerell, in 1810.

But perhaps you may not all remember that in the case of the Parthenon, at all events, no two adjacent capitals are the same size, that no two adjacent columns are the same diameter, that the spaces between the columns are irregular, and that the main horizontal lines of the building are in reality not straight lines, but are curved in a vertical plane. Yet this is but the baldest statement of the facts discovered by Mr. Penrose in 1846 or 1847, and these Irregularities are now universally admitted to be intentional refinements.

And if intentional Irregularities such as these are found to exist in Greek Architecture, I do not know why it should surprise us to find in Italian Mediæval Architecture those other Irregularities of which I have spoken. It is quite true, of course, that the Irregularities of Greek Architecture are not at all as strongly marked as those of Italian Mediæval Architecture; but this after all is exactly what we should have expected, for in a style of Architecture whose chief characteristics are order and symmetry, a very slight departure from the normal is

more remarkable than a much more serious aberration in a style less fettered by traditions of order and regularity.

#### BATH ABBEY. REPAIR OF THE WEST FRONT.

A MEETING was held at the Guildhall, Bath, on the 24th ult., to formally inaugurate a movement having for its object the repair of the West Front of the Abbey and also of other parts of the building. The Bishop of Bath and Wells presided, in the absence from indisposition of His Worship the Mayor.

It was announced that letters expressing sympathy with the object of the meeting and regret at inability to attend, had been received from Lord Cork, the Marquis of Bath, Earl Temple, Lord Grimthorpe, Mr. Walter Long, M.P., Professor Earle, and others.

The Bishop said they were very grateful indeed to Canon Quirk for taking the initiative in that matter, and calling them together for such a very important purpose. The year that they had reached was, he understood it, the 400th anniversary of the restoration of their wonderful old Abbey Church by Bishop Oliver King. They loved to think that the Abbey of Bath was ancient, and he thought that they would all agree with him that they not only loved to think of its ancient character, but they liked to recognise that it was modern too. What they were aiming at was more the repairs of what already existed, than that kind of "restoration" which, with very free hand, attacked ancient buildings. He hoped that nothing would be done in what they were that day beginning which was not necessary for the preservation of the building, and for such repair of what already existed as would make it more effective than it now was, and with the greatest possible care that nothing should be done of so new a character as to alter what they already prized and admired so greatly. He thought they ought to endeavour to remove the work from any mere local ideas which they might have about the repairs that they were about to enter upon; they should undoubtedly try to be guided by the advice, not necessarily of any one of themselves, but of some architect with very wide ecclesiastical knowledge, who would be able to tell them what was advisable for a building of that character, and who was so thoroughly imbued with the spirit of his work that he would not endeavour in any way to exhibit himself and his work in what he was doing, but would maintain the spirit and the work of those who had gone before him. At the present time they could hardly form an exact estimate of what the cost would be; they would have to reserve that until they heard what the report of the selected architect might be, but they must take care not to do the thing too cheaply—they must take care to do the thing well; they must take care that whatever was done in their time should be such that after-ages would thoroughly approve of. They thought with great interest of what had been done in the way of preserving that magnificent church. They would think, many of them, of Bishop Montagu, who did so much about the beginning of the seventeenth century; they would think of what had been done in their own day; they would remember that Mr. Kemble, whose name was always held in such deserved estimation in Bath, spent not only so much money, but encouraged others to give liberally to the work which remained, and which was so exceedingly creditable to him and to those who worked with him. They wished to work in the same kind of spirit; they desired that whatever they did now they might never feel ashamed of having done; when they were putting their hands to a great work of this character they must take care to put those hands to that work with reverence for the past, with thought for the future, and with determination for themselves that they would not stint their efforts, but would strive to do their best.

Canon Quirk said he must first of all thank his lordship for the very excellent speech which he had given, and which had struck what he hoped would be the keynote of the meeting. In the statement that he proposed to make, he only wished to deal with two points: first of all, the work to be done, and, secondly, the possibility of doing it. He could not begin what he had to say without a reference to the late Town Clerk, who had this subject so much at heart, and who when the proposal to make the repair of the West Front of the Abbey form part of the citizens' memorial of the Diamond Jubilee fell through, initiated with a kind and unsolicited cheque for £200, sent to himself a "Bath Abbey Fabric Fund." What was the work to be done? They might have noticed that in his letter of invitation he had carefully avoided the use of the word "restoration," and confined himself to "repair." The work to be done was to save the West Front from further decay and dilapidation. They wanted battlements and canopies replaced, architectural features recovered, and structural defects repaired, for in different parts of the fabric there were flying buttresses, pinnacles, and stone work that needed to be made safe. They would say, "What about the figures on the West Front?—the scrolls, inscriptions, angels, statues, ladders, in fact the whole conception of the Heavenly vision itself?" And he answered, "Get the most experienced Ecclesiastical architect of the day—a man interested and skilled in the treatment of ancient buildings, and ask him to examine the fabric and report upon it, and he will tell us—not what might be done—but what can be done and what ought to be done with each figure and feature in question." He added that in all there were something like 70 figures on the West Front, of many of which they had casts, but no one would contemplate or tolerate a new front; they said "the old is better." As to the probable cost, the Canon declined to commit himself, but he referred to what had been expended in former times on the Abbey, and in more recent times at Wells Cathedral and at Salisbury Cathedral, quoting figures to show how frequently estimates were largely exceeded. He concluded by saying that if precedent went for anything, it said that they had better estimate high enough, and when they had estimated to the limit of their capacity or judgment, they should double the amount. People had spoken of it as a question of "Hundreds." He ventured to think it would take nearly all the hundreds there were in a thousand to put up the scaffolding which would be necessary for the work. They would break into their second thousand before they really began the actual repair, and how many thousands it would cost altogether they had yet to find out. The year 1899 was the 400th anniversary of the erection of the present Abbey Church; it was recognised on all hands that it afforded a great opportunity of keeping this quat-centenary by placing in a sound and satisfactory condition the building committed to their trust by their skilled and pious ancestors of 1499.

Archdeacon Bothamley supported the resolution, which was carried *nem. con.*

Sir Richard Paget moved: "That an executive committee be formed, to whom shall be relegated the selection of an architect, who shall inspect the building and report to the general committee on the work required to be done." In undertaking that work of restoration, they were fulfilling a sacred duty—a duty in which not Bath alone, but the whole diocese might reasonably be asked to share. These ecclesiastical edifices in all their beauty were the glory of the nation; and if in the course of ages it was inevitable that the slow process of mouldering decay should gradually have the effect of destroying the fabric, surely their duty was plain—they must do battle with the forces of Nature, and must repair her damages. If that be their duty, in what spirit should they approach it? Let them not despise the warning of history. In Dugdale's "Monasticon" he

read that John, Bishop of Wells, in the reign of Henry I, pulled down the old church and erected a new one "much fairer," but the historian in all honesty was bound to add that that also went to ruins. Now, they did not want an architect to pull down the church, they did not want to build a "much fairer church;" they did not want as architect a man full of taste and ideas, who was going to make everything pretty, who would turn them out a smart new spick and span Abbey, with everything, what an old friend of his used to call, "smick, smack, smooth." What they did want was a man who would give most careful consideration to all necessary structural repairs, to ensure the safety of the fabric. This was work which should be done thoroughly and solidly. They wanted a man so saturated with the true spirit of the building on which he had to report that he would readily adopt a new reading of the old poem—and instead of "Lightly tread its hallowed ground," let it run, "Lightly touch its hallowed stone."

Mr. Wodehouse proposed—"That this meeting is of opinion that the Rector and Churchwardens of Bath Abbey should take steps to place in a sound and satisfactory condition the West Front of the Bath Abbey, and other portions of the building needing repair." That acre or two of ground which comprised the Roman Baths and the Abbey and their immediate vicinity, had been, through many long centuries, as it were, the heart and soul of Bath. There was the shrine of the continuous life and traditions of this ancient English city; and the shrine was worth preserving in attractive and becoming order. They were approaching the close of a century, and let them hope that, under the auspices of Bishop Kennion and Canon Quirk, this expiring year would bequeath a legacy to the next century, not only a spirit and purpose akin to the dream of Bishop Oliver King, but also well matured plans and designs for the sympathetic and reverent preservation of the fabric by which that good Bishop had stamped his name on the annals of Bath.

The Dean of Wells, in seconding the resolution, gave some interesting details of works of restoration carried out at Wells Cathedral, and laid emphasis on the fact that when the West Front of the Cathedral was restored in 1868-1874 the cost was £13,196—about double the original estimate. He, therefore, advised them to lay their plans early; they had better say at once that they wanted a very considerable amount; the higher they aimed the more they were likely to get. It was quite useless to suffer from financial humility when they had architectural plans in hand.

The ex-Mayor (Major Simpson) moved—"That a subscription list be opened forthwith, and that a general and public appeal for funds be made as soon as the architect's report be received and adopted by the General Committee."

The motion was carried, as was also a vote of thanks to the Bishop.

#### HOW THE POOR ARE HOUSED IN DUBLIN.

ON Saturday, in the Southern Divisional Police Court, Mr. Francis Taaffe, of Hill View Terrace, Clontarf, appeared in answer to a summons issued at the instance of the Corporation, for having certain properties, occupied as tenement houses, 1 to 10 Taaffe's-row, back of 19 Denmark-street and Cole's-lane, in a state unfit for human habitation. The summons set out that the houses were imperfectly lighted, had insufficient yard space, were unprovided with proper sanitary arrangements, that the drains were in a bad condition, the closets were insufficient in number and insanitary, the stairs narrow and dangerous, and the rooms and halls too small and badly lighted and ventilated.

Mr. Seymour Bushe, Q.C.; and Mr. P. White appeared for the Corporation. Mr. T. L. O'Shaughnessy, Q.C., appeared for

Mr. Taafe. The following officials also appeared in the case:—Sir Charles Cameron, C.B.; Mr. Henry, Assistant Town Clerk; Mr. C. J. MacCarthy, City Architect; Mr. Delany, Assistant City Architect.

Mr. Walter G. Doolan, M.R.I.A.I., and Mr. J. J. Farrall, M.R.I.A.I., appeared on behalf of Mr. Taafe.

Mr. Bushe said the property which it was sought to have condemned was in a horribly bad state, and it was evident that a great sacrifice would have to be made to put the houses in anything like a habitable condition.

Mr. Charles J. MacCarthy, F.R.I.A.I., City Architect, produced the maps and plans of the locality. In his evidence he said there were no water-closets and no way of getting rid of the slops of some of the houses. The staircases were only 25 in. wide; they had no hand-rails, and were entirely unlighted, except from such light as was got from the open doors. He also described the general condition and surroundings of the property as being unfit for habitation.

Sir Charles Cameron, C.B., said all the houses were in an extremely narrow place, the whole supply of light and air coming from a court. The consensus of opinion on the part of all sanitarians was that these back-to-back houses, which were common in the English manufacturing towns, were very bad, and contributed to the high death-rate. There were only four closets for all the houses, and the residents in Taafe's-row used them by sufferance.

Mr. Bushe, Q.C.—Assuming that nothing is done, and these places are left as they now are, will they, in your opinion, be absolutely unfit for human habitation?

Sir Charles Cameron—That is certainly my deliberate opinion.

In reply to Mr. O'Shaughnessy, Sir Charles Cameron said that in 1885 a case was before the Court for the closing of these houses, but it was dismissed on the evidence. The high death-rate of Dublin had decreased one-half owing to the improved sanitary conditions. He knew that Mr. Taafe had spent £45 on sanitary improvements in November last, but it was wholly insufficient. Some means ought to be adopted to put these houses in a civilised condition. The present condition was abominable, and he himself on his visit met with an odour which was absolutely sickening. It was no uncommon thing for him to hear, when proceedings were taken against landlords, that there was no sickness in the locality!

In reply to Mr. Bushe, Sir Charles Cameron said the tenement population of Dublin was very fugitive. In the police courts 300 evictions were granted every week. There were about 800 people to the acre in this particular locality. He suggested that three of the houses should be taken down, or each alternate house, so as to give room for the erection of closets for the remaining houses.

This closed the case for the Corporation.

Mr. Taafe was called, but at the outset of his evidence Mr. Bushe asked the magistrate to take a note that he (counsel) objected.

In reply to Mr. O'Shaughnessy, Mr. Taafe said he had had the property for twenty-five years, and had expended a considerable sum of money on it. In 1895, owing to summonses having been taken against him, he erected the closets, but he was summoned again last year about them, because it was said they were in bad order. He expended more money on sanitary arrangements. The ten houses consisted of eighteen separate tenements. He employed a man every day to keep the places clean. He thought that, considering the small rent he got—1s. 6d. a-week—these houses were as good as any small houses in the city. The valuation of the ten houses was £25 a-year, in addition to the £10 taxes he paid.

Mr. Bushe—Do I understand you intend to do nothing?—No; it is perfectly useless.

Mr. Bushe—And you will leave them just as they are, unless you are ordered to close them by order of the Court?—Yes.

Mr. Bushe—Are you aware that a fatal case of smallpox occurred there in '95?—I don't know.

Mr. Bushe—Do you know there was a death in one of these houses?—I don't believe it.

Sir Charles Cameron said his returns showed that a death from smallpox did occur in these buildings.

Mr. Taafe further said that it was as a result of the proceedings against him that he erected the closets. Previously they were old-fashioned ones. His own business premises were only 60 feet away from the buildings.

Mr. Bushe—Do you put any limit upon the number of persons who should occupy each room?—If I saw too many people I should interfere. There may be only four or five in a room, but they may take lodgers.

Mr. Bushe—How many human beings do you say should occupy these tenements of yours—100? No 80?—No; about 40 or 50.

Mr. Bushe—Then, if there are 2 in the 10 houses it is in excess?—I don't know that there are 62.

Mr. Bushe—I suppose you don't care how many there are so long as you get your money?—It depends on the class of people.

Mr. Doolan and Mr. Farrall, architects, were called on behalf of Mr. Taafe.

In reply to Mr. Bushe, Mr. Farrall said he would not put 70 people in the houses, but he thought two people in each room was not too many. The houses were not originally intended for tenements. He admitted that the absence of any yards was a disadvantage.

The case was adjourned for a fortnight, to allow of the magistrate visiting the premises.

Mr. Taafe was also summoned for not abating the nuisance created by an ashpit in Cole's-lane, and Sir Charles Cameron said the Royal Commission on Health had recommended the abolition of these ash-pits.

## THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

### THE PRESIDENTS ADDRESS TO STUDENTS.\*

It is customary in this month to give an address to students, and it is one of the pleasantest duties the President has to perform.

The world consists of the Past, the Present, and the Future. The Past is hopeless; it cannot be altered or improved; it can only be studied. The Present, of which the practising architects are representatives, is too well known to dilate on; and the immediate Future consists of the students, and they allow us to conjure up all sorts of visions, and to delight ourselves with fancying that their works will be stamped with the perfection that ours have missed.

Aristotle tells us that most things can be equally well done or better done by youth than by age; but there is one thing that age alone can give—that is, experience. I think it is a pleasure to all men of some years to convey as much of the results of their experience as they can to the young who are following in their footsteps, or are about to follow. In an art like ours it is very difficult to know what useful experience we have to impart—I mean æsthetic experience—because our views and those of the rising generation are probably different, if not opposed. I give you some remarks of Professor Cockerell to the R.A. students of my day: "That they should study all styles, for they can never tell how fashion will change, and that the style they have chosen may not be abandoned." This was said when imitation Gothic was all the rage.

I hope for the advancement of architecture which will take every one, and that when it does come it will not be an imitation of some dead style.

At present, at least, we have no means of evoking genius, and the only means that has

yet occurred to me to improve our art is by learning principles and by striving. It is true I was found fault with by one of my hearers on a former occasion for not invoking the aid of the Almighty; but it seemed to me then, as it does now, that my business is to say as far as I can what earthly methods, and what earthly methods only, have the chance of improving us.

There is one thing I have remarked—that all the sciences and arts seem to go in cycles, or, as we should say, are mounted on Fortune's wheel, and, as it turns, one art or science is the top of the wheel while the other is in the mud, and as it goes round the positions are reversed. It is not very easy to trace the cause of these epochs, but we can safely say that, at the present moment, the epoch is that of the application of science, and is on the top of the wheel, while Architecture is very low down. When these epochs occur, the whole atmosphere, as it were, is full of the desire for excellence in the particular art or science then coming into vogue, as a knowledge of Roman architecture was at the time of the Italian Renaissance; and at such times men of the most transcendent abilities have an ambition to succeed in the new fashion, even though it promise but little wealth, and very often nothing but the escape from starvation, even if it offer that. Milton's was in England a poetic age, though he got for his "Paradise Lost" little more than the price of waste paper; but he at least got an immortality of more than 200 years, and we know not how many more centuries he will last and be studied; while poor Otway, the author of the once admired "Venice Preserved," who lived in the same century, is said to have died of starvation, and, though he was popular in his time, I am afraid there are few but professed students of dramatic literature who have ever read a line of his. A great incentive to any kind of study or achievement is that of being thought highly of by your contemporaries, though there is a higher stimulus in the hope of that sort of immortality which mortals can attain.

One of these inducements at the present time is impossible to be looked for—I mean the admiration of your fellow men; for who knows or cares whether your work is good, bad, or indifferent, except perhaps a brother architect? I do not know if the sort of limited immortality anyone can get has ever been obtained by those who have not been admired by their contemporaries; at any rate, it has not commonly been the case. Yet we hear all the unsuccessful votaries of the fine arts saying, that though their works may not be appreciated now, they will be appreciated by posterity. I have admired architecture I have casually seen, without knowing the name of the architect, or whether he were alive, and thought this was by a good man, which I hope, if he is dead, may be some satisfaction to his manes. Architecture, at least in good times, does not so much represent the proclivities of the artist as the general aspirations of the people; for, though the great artist seems only to portray his own ideas, he must, if popular, do admirably what every one desires to do himself, in spite of Dr. Johnson's attempted refutation of Boswell's remark that "the poet only says what every man thinks and would say": "Then, sir, according to you, the poet is only the tailor of other men's thoughts." At any rate, architecture must have conveyed to the minds of the people when it was built the sort of effect that they desired, for models were mostly made for approval before the building was done, while to future generations it clearly speaks of the taste and inclination of the age in which it was produced: it shows the genius and knowledge of the architect, and the skill and care of the workmen, so that if a ruin is seen, or a considerable architectural fragment is found, we cannot help forming a strong opinion of the taste, skill, and proclivities of that age.

I think I have pretty well expressed the indifference of the present age to Architecture, so that you cannot expect much

\* Delivered at the Sixth General Meeting, on the 23rd ult.

honour or reverence on account of your work, or that it will cause much pleasure or delight to the living beholders. It becomes questionable whether there is enough stimulant to attract men who possess the intellectual faculties necessary for producing fine architecture, I mean such architecture as will be admired for two or three thousand years. I hope that my observation has been wrong as to the chances of immortality for those whose works are disregarded by their contemporaries, for if the architect is really before his time, he should be recognised by those that come afterwards. I cannot give that sort of encouragement to the students that used to be given me when I was a boy—that all men had equal abilities, and the great man was merely distinguished by greater perseverance and industry, although it is quite clear that extraordinary industry and perseverance are the concomitants of genius. I think I understate the case if I say that one considerable architectural genius is to be found among 100,000 of the inhabitants of any highly civilised country. To be a great architect involves a capacity for acquiring the higher branches of mathematics and to be able to use them; to comprehend at least that branch of Natural Philosophy that is called Statics, and even to advance beyond the point at which it has then arrived; to so arrange a building as not only to fit it for its purpose, but to put it in a shape that will command the admiration of skilled and cultivated beholders, and to invest the finished structure with a capacity of exciting emotions that are proper to its use. Architecturally this is brought about by simplicity, perfection of proportion, by outline, by the proper disposition of light and shade, and by size and mass. To the former qualifications of the architect must be added the capacity of knowing what additional interest can be given to important parts by sculpture, and how colour can be properly applied to the whole structure. Of course it would be infinitely better for the architect to possess the whole of these qualifications; I do not know whether this was ever the case, though Sir Christopher Wren very closely approached it. We know that in whatever excellent qualities the Renaissance architects were deficient, they were mostly sculptors or painters. Where they were deficient was in construction, in invention, and in the proper expression of their buildings.

According to Mr. Ruskin, all the architects of the world since the early Greek times were sculptors, and the sculptors thought, like Mr. Ruskin, that pure architecture was ridiculously easy, or came naturally to all men. I think that he was conversant with the history of the Renaissance architects, who were undoubtedly sculptors or painters, and applied these qualifications to the Greek and Mediæval architects; but, as far as I can find out, there is not the slightest ground for believing it true of the Mediævals. His Excellency Monsieur Jusserand tells us of a monk who was allowed to have a nude model to make studies from for a crucifix, but we have not the slightest hint that he was an architect as well, and the note-book of Wilars de Honecourt, whom we know to have been an able architect, does not impress us by his sketches with the idea of his being a competent sculptor or painter. Some profound students of Greek literature would probably be able to confirm or deny the hypothesis that all the Greek architects were sculptors; but considering that we do not know that Phidias was an architect, it seems unlikely that the great architects were sculptors or that the great sculptors were architects. Aristotle was a great admirer of architectural art, and any one bent on knowing whether the architects were sculptors as well might find indications of it by reading through his voluminous works to that end. Plato was evidently conversant with the craftsmen of his time, but I do not recollect any suggestion of his that the Greek architects were sculptors. We know from Trajan's letter to the younger Pliny that the Roman architects were mostly got from Greece, but

we do not know whether they were sculptors as well.

(To be continued.)

#### NOTES OF WORKS.

The memorial stone of new schools for the parish of St. George was laid on Saturday last by the Archbishop of Dublin. The building is now in course of erection on the north side of Lower Sberard-street, on a site which, though irregular in shape, is in many respects a very suitable one, being fairly open and spacious, and conveniently situated. The plan has been determined in some measure by the outline of the ground, and will take the form of a Greek cross, its greatest length and breadth being internally 124 ft. and 46 ft. respectively. It will consist of a single storey, so that all the rooms are on one floor. This arrangement is not only a convenient one for teaching purposes, but it also enables the entire floor space practically to be available for large meetings, and for drill purposes when required. When not so used, rolling shutters will be let down to divide the space into schoolrooms of suitable size. There are two main entrances from Sberard-street, leading, through roomy porches, to the boys', girls, and infants' schools respectively. The number of children to be provided for is 500, and the accommodation afforded fulfils all the requirements of the National Board of Education. The walls are constructed of breeze concrete, a material at once strong and fire resisting; the dressings of the openings and the plinth course, quoins, &c., are of brick, red facing brick being used on the exposed portions. The intervening space will be covered with pebble dashing, which will form an agreeable contrast to the brickwork surrounding it. Internally the roofs will be open to half their height, the timber principals being exposed and stained. The lower part of the walls will be lined with wainscot, the upper portion being plastered. Due provision has been made for efficient sanitary fittings and for ventilation and heating. An ornamental turret will surmount the main roof over the centre of the building, which will not only give importance and height to the building, but will also serve as an outlet ventilator for extracting the vitiated air from the various classrooms. The contractor for the entire work is Mr. R. Farquharson, of Jones's-road, and the architect, Mr. W. M. Mitchell, R.H.A., of Leinster-street, under whose superintendence the building is being erected.

The trustees of St. John's Church New-castle, Co. Down, have under consideration the erection of a vicarage in connection with the church. The plans have been prepared by Mr. John Russell, architect, Belfast.

Drumbanagher Church, Diocese of Down, has been presented by the Misses Close with a very beautiful organ, which was used for the first time on Sunday, 29th January. The organ has been specially designed to fit in a corner of the nave, next the chancel, and shows two fronts of decorated pipes. The instrument has given great satisfaction to the donors, and was built by the Messrs. Telford and Telford, St. Stephen's-green, Dublin.

A pulpit has been erected in the church of St. Teresa, Clarendon-street. It is in the Romanesque style, and is mainly composed of marble. The base is square in form, and from it springs five shafts, the centre of which is a cluster of four semi-octagons, and composed of Sicilian marble. The remaining four are circular in form, and consist of rouge jasper. The shafts are moulded on bases and surmounted with richly-ornamented capitals. Above is a massive carved ornamental cornice, the top of which forms the platform. The shape of the pulpit changes from square into an unequal octagon, with four large sides and four small, one of the large sides forming the doorway. The body is made into ten niches, each filled in with groups of statues, carved in the purest Carrara marble, with backgrounds of gold

Venetian mosaic. These niches are divided by triplet cluster columns, the shafts being of Italian gricotte, with richly-carved and moulded bases, bands, and capitals. The whole is then surmounted with a beautifully sculptured cornice, terminating with a massive moulded capping. The work has been executed by Mr. Edmund Sharpe, Sculptor, Great-Brunswick-street.

#### LAW.

##### A WOOD BLOCK FLOORING CONTRACT.

*B. Ward and Co. v. The Western Mail, Ltd.*—This action came on for hearing in the Queen's Bench Division of the High Court of Justice, London, on the 13th ult., before Mr. Justice Wright, sitting without a jury. Mr. Witt, Q.C., who appeared on behalf of the plaintiffs, stated that his clients were contractors, of Westminster, and the defendants were the proprietors of *The Western Mail* newspaper. The action was brought to recover the sum of £119, made up of three items. The first was for laying granite concrete in their building; the second, a small item, was not in dispute; and the third claim was for laying a wood block flooring, with a teak border. The defence was that the work ought to have been done in a workmanlike manner, to the satisfaction of the proprietors of *The Western Mail*, and it was not so done. As a matter of fact, whether the work was good or bad, it was finished in December, 1896, so that it had been down two years, and now, in January, 1899, two years after, defendants having had the use of the flooring for over two years—and he was told that something like 1,000 people per day walked over it, and it had not given way—they turned round and said it was not satisfactory. After two years' use, it was a rather strong proposition to say they were to pay nothing for the use of plaintiffs' work, which, at any rate, had stood the test of time. The defendants complained that the floor laid by the plaintiffs was irregular and cracked, but, if that were so, there was an important fact to remember. Underneath the flooring there was a tremendous heat, because the defendants had their engines and boilers underneath, and hot pipes ran under the concrete. Assuming that there was some slight defect in the work, which he did not admit, it was absurd to suppose that the plaintiffs were not to be paid anything at all, after this flooring had been laid and used for two years. After a number of witnesses had been called on behalf of the plaintiffs, Mr. Lascelles Carr, managing director of the defendant company, stated that the plaintiffs promised to lay it down to the satisfaction of the company, and if it was not laid satisfactorily, the plaintiffs were to alter it, but that they had not done. Mr. Alfred Stevens, a representative of the Westminster Flooring Company, gave evidence as to visiting Cardiff, and making an examination of the floor of the defendants' premises. He did not think it had been laid properly. His Lordship, in giving judgment, said it was a very unusual contract, the plaintiffs having undertaken to do the work in a good and workmanlike manner, and to the satisfaction of the proprietors of *The Western Mail*. These conditions were accepted by Messrs. Ward's representative with his eyes open. Mr. Carr's evidence on the point was supported by the fact that an alteration was made in the contract, by which the money was not to be paid until three months had elapsed from the completion of the work, that was until the success of the work had been established. The plaintiffs, being fully warned of the difficulties, took the risk of heat and vibration, if there was any such risk, which he did not pretend to determine. Mr. Witt had said that the plaintiffs ought at least to be paid something for the work they had done, but he (his lordship) did not think so. If the plaintiffs offered to undertake this experiment at their own risk, and to satisfy the defendants that

they could do it better than anybody else, on the terms that they should not be paid unless they did satisfy them, it was perfectly right that they should not be paid if they failed. They were, no doubt, rash, and had entrusted their interests to someone who did not take due care of them, and they failed, consequently he should enter judgment for the defendants, with costs.

### SITTINGS AT NISI PRIUS.

(Before Mr. Justice Johnson, without a Jury.)

*Harten v. the Dublin Electric Tramway Company.*—This was an action by the plaintiff, a licensed grocer, carrying on business in George's-street, Kingstown, to recover damages laid at £700 in respect of injuries alleged to have been caused to his premises by reason of the lowering of the level of the street-way in front of his house, consequent on the construction of the tramway line. The plaintiff, who is the lessee of the licensed house, 17 Upper George's-street, sued the defendants to recover £700 damages, and also for an injunction to restrain them from further committing the acts complained of. The plaintiff said in 1895 and 1896 the defendants wrongfully lowered the level of the roadway in George's-street, Kingstown, in front of and abutting upon his premises, so as to obstruct and interfere with the access thereto. He also said the works, if lawfully done, were negligently executed. The defendants traversed the causes of action, and denied negligence. They said that under the provisions of the Dublin Southern District Tramways Order, 1893, and the Acts incorporated therewith, they were authorised to alter the level of the then existing tramway in George's-street, Kingstown, including the portion in front of plaintiff's house, and they did so alter the level lawfully.

Mr. Justice Johnson said he found no evidence of negligence in the execution of the works, and that the cause of action must fail. The defendants to the other cause of action relied on a justification in the exercise of statutory powers conferred on them under the Tramway Order of '93; on a justification under the authority of the Kingstown Township Commissioners, and on leave and licence of the plaintiff. His Lordship held that all the defences had failed, and that judgment must be for the plaintiff. The plaintiff was entitled to recover, first, in respect of injury to business and obstruction of access while the lowering of the road was going on; second, in respect of injury to business by reason of the present condition of the approach and access to his house in consequence of the alterations of the footpath; third, in consequence of necessary alterations in his premises in order to restore them as near as might be to the position in relation to the altered footway that they were in relation to the footway before it was altered; fourth, for depreciation in the value of the premises. He would assess the damages under these heads, and would give the figures to the solicitors.

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## GRIT STONE OF THE BEST QUALITY.

**R. TROY** has a quantity of the above in the ROUGH, and also some WORKED which she wishes to sell in her Yard at  
BRIDGE HOUSE,  
CLONASLEE,  
QUEEN'S CO.

## HISTORY OF Dublin Hospitals & Infirmaries, FROM 1188 TILL THE PRESENT TIME.

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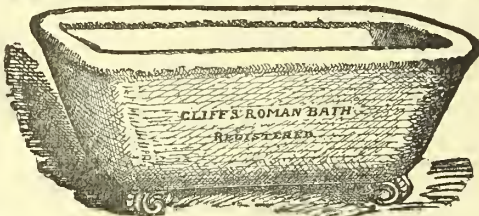
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## THE IRISH BUILDER.

VOL. XLI.—No. 940.

## PLANS FOR THE UNIVERSITY OF CALIFORNIA.

**W**E take the following particulars from a 4to pamphlet recently issued by the Committee of the Phoebe A. Hearst Architectural Plan for the University of California. The Report is printed in four languages, the last one being English.

"One hundred and five packages for the Phoebe Hearst Architectural Plan for the University of California arrived at the office of the United States Consul General at Antwerp. There each case was marked with a number and the date of arrival, and insured for 5,000 francs for a period of six months. Many of the packages arrived much damaged; all of the large unsealed cases and the letter belonging to one of these had been opened at the Custom House. . . . From the 17th to the 22nd of August the plans were measured for framing. At the same time the mottoes on the plans and on all the documents connected therewith, were covered, and the letters of identity were placed unopened in the safe deposit vault of the National Bank of Belgium. The average time required to measure each set of plans was six minutes. . . . During the month of September the plans were mounted on stretchers. It took about thirty minutes to mount each set of drawings.

It was understood that the authors of the plans wished their work to be seen by no one but the Jury, and their names to be unknown. Every effort was made to respect this wish. It was taken for granted that the address on envelope No. 2 gave no clue to the authorship of the plan to which it belonged. An officer of the secret police of the City of Antwerp was always present while the plans were being handled. He put his seal on everything, closed or covered, and kept an account of the time the plans were being worked with. The brigadier, or chief of the guardians of the Museum, was made responsible also. At night, watchmen were on guard, and the Fire Department furnished firemen whenever and wherever there was need of them. While the plans were exposed, special care was taken; policemen guarded all entrances, and extra men were present at night. The doors and windows of rooms where plans were stored were kept locked and sealed, and no seal was broken without the officer and witnesses being present. Before being opened, the cases were examined to see if they had been tampered with. When they were closed, a band was pasted over the joint between lid and box and tied with a tape, both ends of which were fastened with sealing wax. Before the box was reopened the seals were examined. While a drawing was on the table for measuring or for mounting, the officer kept it covered that no employee might see the composition. As soon as a design was fastened to its frame, it was covered with a double thickness of paper beld down with ribbons tacked down at the corners. A seal covered the tack and

joint between the cover and the frame. When a motto under cover was to be inspected, one corner of the covering was raised and then resealed. The mottoes on the descriptions were covered in the same manner as those on the drawings.

The envelope No. 3 was opened before the Jury meeting, but as soon as the address was taken and the motto noted, the letter was put into a new envelope and sealed. This sealed letter was attached to the plan to which it belonged and remained so during the Jury meeting. The book of the addresses was seen by no one except the employee who wrote them. In short the employees of the Phoebe A. Hearst Architectural Plan for the University of California did what they could to merit the confidence of the authors of the plans.

The first meeting of the Jury was held at Antwerp, in the Royal Museum of Fine Arts. The meeting began at 9 a.m., September 30th, and continued in daily session, except on Sunday, until the evening of October 4th. The Jury was composed of Mr. R. Norman Shaw, Mr. J. L. Pascal, Mr. Paul Wallot, Mr. Walter Cook, and Mr. J. B. Reinstein. At the beginning of the first session, M. Pascal was made President, and Mr. Wallot Vice-President. Before seeing the plans, the Jury decided a number of questions regarding the competition, and discussed the programme in detail. With regard to the plans which had arrived after the 1st of July, the following resolution was adopted:—Resolved: That the Jury has studied the question from various standpoints, taking into consideration the various methods of transport used by competitors, the hindrances occurring from rules and laws, varying in different countries, with regard to the bulk and weight, method of covering, &c.; the confusion arising from improperly executing the details as required by express companies, parcel services, steamships, and other causes, tending to retard the arrival of the packages within a reasonable time, and the fact that the express companies do not guarantee delivery within stated time. After a long and careful examination of these questions with a view to the greatest fairness, the Jury concludes that all designs which arrived at the Consulate within the two days after July 1st are to be exhibited, and if any plan arriving later be among those chosen, the cause of its late arrival shall be investigated. The Jury decided to make its choice by elimination as indicated in the programme.

With regard to the examination of the plans, it was decided that all the designs should remain in the Exhibition Halls until the final decision, because the discussions arising in the final elimination might suggest merits in plans previously eliminated that would entitle them to a place among those finally selected.

Full details of the work of the Jury is furnished:—"On the first and second elimination, all of the Jury worked together, and no plan was eliminated if any one Juror objected. On the first elimination, 44 plans were retained, 54 rejected. During the second elimination, one plan that had been retained in the first elimination was rejected, and two that had been rejected in the first were retained. These last two, however, were not among the 21 which remained after the second elimination. On the final elimination, each Juror separately chose of these 21 such plans as he thought worthy of

being retained for the final concours, and made a list of the numbers he preferred. These lists were then compared, and the numbers occurring on the majority of lists noted. After discussion of the plans receiving no votes, or a number of votes less than the majority, no plan was eliminated if any one Juror objected. Before making a final choice, the Jury re-examined all of the plans previously eliminated. Upon the final vote, four plans received one vote each, and eleven plans received the unanimous vote of the Jury, and were declared the choice for the final concours. The letters corresponding with them were opened, and the authors notified of their success. The Jury then adjourned. Upon receiving a verbal report of the proceedings of the Jury, Mrs. Hearst expressed a desire that the authors of the four plans receiving one vote each should receive some reward, which matter was naturally left to the trustees for consideration."

Within the covers of another pamphlet sent to us, we have seventeen well-executed photographic views of the exterior and interior of the Musée Royale des Beaux Arts, Anvers; also views of apartments occupied during the examination of plans by the Jury.

## SANITARY AND ARTISTIC PLUMBING.

In addressing, last week, a meeting in connection with the Plumbers' Registration Scheme, and the Plumbers' Company, Prof. Aitchison, P.R.I.B.A., made the following remarks:—

The Plumbers' Company has done a most excellent work in having those plumbers that are masters of their business certificated, and I may say that there is a great dearth of them; and when I ask builders why they have not a certificated plumber, they say it is impossible to get one. The principal thing we require is to have men who can be trusted to wipe joints so that they are air-tight, and make other junctions air-tight too. By this means we have prevented a great many of the diseases that faulty pipes and junctions cause, and have besides improved the health of those persons who would otherwise have their health lowered by the exhalations of faulty pipes; and besides these advantages the men have learned to execute ordinary plumbers' work much better. We cannot be too careful of our health, for without that life becomes a burden; but at the same time we must consider that 'man does not live by bread alone.' Nature spreads out before us all the beauties of the sky, the earth, and the ocean for man's instruction, delight, and solace; and the plumbers were of yore as skilful in embodying the beauties of nature they had admired as the other craftsmen in the building trades. In fact, when I was a boy, the plumber's shop window was one of my greatest delights, for in it were beautifully ornamented cisterns, lead vases, lead statues, and ornamented lead plaques for dates and inscriptions, not to speak of the quaint, if not beautiful, rain water pipes and heads. All this has departed, and certainly every architect and every person of taste is anxious to see it revived. Some of the walks in Hampton Court Gardens are still adorned with leaden statues and leaden vases; and, when I was a boy, the gardens of the great merchants in the City were adorned in the same manner, and very often with lead fountains, too. In the Middle Ages and in the early Renaissance, considerable portions of buildings then erected were ornamented with leaden crestings on the roof; there were lead tops to pinnacles and lead sockets to weathercocks; and the leadwork to the lights was made in beautiful or curious patterns. . . . I don't know why all these

charming applications of design should be utterly laid aside and forgotten for more utilitarian objects. The exercise of the artistic part of the craft must surely give more pleasure and pride to the craftsman than the mere wiping of a joint, or the heating out of a cesspool, however well done, besides the interest and pleasure that it causes to the public. I hope the Company, while still continuing to instruct the workman in that which regards our health and convenience, may also add to his cultivation and interest in his work by showing him that he has not yet mastered the whole of the craft when he can execute properly the more utilitarian parts of his trade. Ornamental plumbing is not entirely disused, as there is a beautiful leaded lantern on one of the churches at Brighton, designed, I think, by Mr. Bodley.

#### CORRESPONDENCE.

##### "IRREGULARITIES OF ITALIAN MEDIEVAL BUILDINGS."

TO THE EDITOR OF THE IRISH BUILDER.

SIR,—Mr. MacCarthy's paper, read at the late meeting of the Royal Institute of Irish Architects, on Mr. Goodyear's publication, as to irregularities in Italian Mediæval Buildings, reported, with illustrations, in the current IRISH BUILDER, which I have just seen, is very interesting, and no doubt novel to many members of the profession. But the suggested "perspective illusions" and "optical refinements" are surely founded on illusive inference. It does not appear from the report that Mr. Goodyear goes quite so far as Mr. MacCarthy in this direction, as he is only quoted in this respect for "constructive purpose" and "intention or design," without implying for what purpose or design; indeed if he did, one would suspect that he had lost his Yankee cuteness, or blended it with a mild infusion of Mark-Twainism.

Most of the old school, who, in our youth, "many golden years ago," studied the "Five Orders," were aware that Italian architects of the Renaissance period had designed and constructed "perspective illusions," which, although not perceptible to a casual or ordinary observer, were quite evident on professional or intelligent examination. We also know that the Scala Regia in the Vatican was the typical instance of it, but then the great length in proportion to the width, although considerable, and the ascent, aided the perspective illusion of the gradually and regularly decreasing height and diameter of the columns at each side, and of their pedestals and entablature, and of the general width and the height of the vaulted ceiling, which add vastly to the apparent length of the stairs. This is, however, quite different from comparatively short and wide churches. Besides, it is doubtful if perspective was generally known or practised before Leonardo da Vinci explained it scientifically in his work (the first, I think) on the subject.

The irregularities mentioned are in themselves very interesting, and prove that the old architects did not shrink from such irregularities wherever there was a cause for it, whatever it may have been, and where it did not involve evident or perceptible defect, or bad effect; but that these irregularities were designed to produce "perspective illusion" or "optical refinement," is certainly non-proven in Mr. MacCarthy's paper as reported, if not disproved. First, as to the "perspective illusions," the effect of the instances given and illustrated would clearly be to shorten the appearance of the buildings, which could not have been desired. In the case of S. Maria Novella, the spacing of the arcade, first increasing and then decreasing, would be at best confusing as to perspective effect, and in the case of S. Stefano, as the spacing and height increase as they recede, the "illusion" would tend to diminish the apparent length. Then, as to the "optical refinement," Mr. MacCarthy must have followed, if he did follow, Mr. Goodyear into

a mist, in dealing with an imaginary centre line at right angles from the centre of the front, to show the "deflection" of the plan, instead of treating these cases illustrated as canted or skewed fronts or facades, and rear in one instance. Just to test the suggested "optical refinement," let us suppose we had stepped inside the front door and kept our backs to it, would not the slightest turn of the head or direction of the eyes totally nullify any possible effect of "optical refinement"? The side walls or arcades being parallel, do not at all affect the cant or skew of the front or rear; there must have been some local cause for it, perhaps previous structures, or limits of site, but this is mere surmise. That in so many cases illustrated the cant or skew of the front should be to the north-west, or the deflection of plan as stated to the south-east, is singular, and deserves careful investigation, without preconceived "optical refinement" views.

The supposed Greek entasis, with Mr. Cockerell's discovery, and Mr. Penrose's super-refinement of the theory, that I remember created such furore long ago, does not help to elucidate the matter, they are so dissimilar, and I confess to an old doubt as to Mr. Penrose riding his hobby too fast, and too far, and to wishing at the time that there was some one like the doubting savant who when it was stated at a meeting of his confreres that if a fish was gently dipped into a perfectly full vessel of water that the water would not overflow, and it was proposed that each should consider the cause, and report on it at the next meeting; and, when they met, each had a very ingenious theory to propound, quite conclusive in his own opinion, except the doubter, who had no theory, for he tested the fact, and found that the water overflowed, and possibly, if Mr. Penrose's elaborate figures were tested, although general discrepancy of dimensions might be discovered, it would not be easy to make them support a uniform entasis, either vertical, horizontal, or raking. No doubt there are irregularities and variety in Greek buildings, as in the Propylæa and the Erechtheum (or should it be Erechtheon, if the Parthenon is not the Partheneum), and so beautifully and eruditely illustrated by Wilke Wilkins, the architect of Nelson's Pillar.

Nor has the suggestion that the "life" and charm of the old buildings is due to the irregularities illustrated, been at all proved, had Mr. Goodyear or Mr. MacCarthy put it to the test, whether similar buildings of the same date that were free from such irregularities did or did not possess life and charm and found that they did not, then, indeed, it might be said that the irregularities gave the life and charm that we all see and admire in such buildings, almost invariably with or without irregularities. Still Mr. MacCarthy well deserved the vote of thanks from his fellow M.R.I.A.I. for bringing before them Mr. Goodyear's publication. Let us hope he will continue it either before the Institute or Association, and treat, as he mentioned, of the irregularities of the Cathedral of Pisa, of which, and the adjoining buildings, I have an old and well-preserved work, published in Rome in 1705, but not showing the irregularities.—Yours,

M. MORRIS.

#### THE ARTS AND CRAFTS SOCIETY.

TO THE EDITOR OF THE IRISH BUILDER.

SIR,—The Arts and Crafts Society of Ireland propose holding their Exhibition in Dublin during November of this year. The Senate of the Royal University have again kindly granted the use of their buildings at Earlsfort-terrace, for the purposes of the Exhibition. A substantial guarantee fund has already been subscribed sufficient to enable the Society to complete their arrangements. I hope you will allow me to bring this fact under your notice in order intending exhibitors may communicate with the hon. secretary.—Yours, &c.,

MAYO.

#### ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND.

THE next general meeting of the Institute will be held on the 23rd inst., when a Paper, entitled: "Pitfalls of Practising Architects" (part i.), will be read by Mr. W. Kaye Parry, M.A.

#### MAIN SEWER, STRAND ROAD, BRAY.

At an adjourned meeting, last week, of the Bray Urban Council, tenders for constructing a main sewer along the Strand road were considered. Seven were received, as follows:—H. and J. Martin, £5,715; J. Cunningham, £4,347 15s.; Heggarty and Gault, £3,603 3s. 5d.; James M'Kee and Sons, £3,559 2s.; Gerald Burke, £3,350; Brady Bros., £2,983 12s.; M'Laren and Johnston, £2,836 11s. 6d.

Mr. Langton advocated doing the work with their own men, and suggested that Mr. Comber, C.E., be asked to attend, and consult with the Council on the subject.

Mr. Lacy thought that now or never was the time to do the work. Other commissioners and other chairmen had failed to carry out the work, and, as a "progressive" body, he thought it was their duty to attack it, and not let people see that the sewerage is had. The season was approaching, and they should do this work so as to bring the largest number of people to Bray.

Mr. M'Farland would not like to leave the matter to their own men. They would have to hny plant, and would surely lose by the transaction. It would be better to give the work to a good contractor, and have it completed before the end of June at furthest.

Mr. Butler was in favour of giving the contract to Brady Brothers, a local firm.

The Chairman could not see any prospect of saving money by doing the work with their own men.

It was decided to refer the matter to a committee of those present, who should meet the following Saturday, Mr. Comber, C.E., and representatives of firms sending three lowest tenders to be asked to attend.

#### THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

##### THE PRESIDENT'S ADDRESS TO STUDENTS.\*

(Continued from page 18.)

Most of you probably know that Pascal considered architecture a progressive art, and we all know that it did progress most rapidly in constructive skill, from the end of Romanesque days through Gothic times almost to the very end, and it also changed its æsthetic expression several times.

I think all of us desire to see architecture progress, more especially in æsthetic expression.

Since the application to building of cast iron, wrought iron, and steel, the engineers have surpassed even the wildest imagination of sixty years ago. The Britannia Tubular Bridge is, as far as I recollect, 500-feet span, but Sir Benjamin Baker has made a span of the Forth Bridge over 1,700 feet. It is very unlikely that any architectural work would require a span of more than a tenth of that bearing, and that supposes an extension of more than double the span of the largest groined vault of the Romans, which was only about 80 feet. Still we must to a certain extent look for the advancement of architecture in a nicer adjustment of the mass to its height and to the weight to be carried, and to the form to be given to the supports for the weights and strains that come on each particular piece. In the use of iron and steel architects are very much handicapped, first on account of the slenderness of proportion which, as a rule, renders them unfit to compose with weaker materials, but mainly on account of the little resistance these materials offer to the action of fire,

\* Delivered at the Sixth General Meeting, on the 23rd ult.

unless they are protected by fireclay and terra-cotta; and when they are so protected they very nearly assimilate in size to the supports of old-world structures. Still, as I have so often said before, I think if the Mediæval architects had possessed these materials and had been able to work them as we can, they certainly would not have abstained from using them, as architects of the present day have mostly done. What visions does the use of cast iron raise in our minds as to the possible size and height of buildings! What new forms and shapes does not cast iron suggest when we know that it will take any form we please and any ornaments that can be cast! What visions of colour does it not evoke when it may be made resplendent with enamel!

No one can say that convenience in planning is not greatly studied in the present day, but this convenience has mostly been of the purest utilitarian sort: it has been a question of how the accommodation wanted can be packed anyhow, which should not be the aim of architectural planning, which now, alas! is hardly thought of. The other thing to be aimed at is to give expression to the thoughts, cultivation, and aspirations of the present day, a subject that requires the deepest study and a perspicacity that is rare; for, though we are quite certain that many buildings have not got the proper expression, it is not so easy to say how the proper expression should be got. We have ransacked all the civilised architecture of the past and made collections of it for use, but we have certainly not applied the examples with discretion. The delicate ornaments and suggestive sculpture that were applied to the embellishment of the boudoirs and pleasure-houses of Renaissance beauties, is now lavished on oyster-shops, public-houses, and clothiers' warehouses, on which fluttering cupids are out of place, and the magnificence and stateliness of the palaces of great nobles now deck stores or hotels. We can at once pronounce these to be absurd, but we can hardly lay down a rule for the right expression which should be applied to the immense variety of buildings that are erected; for although we are familiar with the term "playful" applied to some buildings by the architects of two generations ago, we hardly know in what that playfulness consisted.

We must not forget the effects of association. Pediments were only found on temples during the Roman Republic, and Cicero expected to see them in heaven. Gothic with us is mostly associated with cathedrals and churches, and is therefore looked on by the public as a holy style. This, of course, is absurd, for the style in vogue was always used indifferently for all sorts of structures, when there was a style; but the architects did not bestow the same character on a coal-store or a tinker's shop as they did on a cathedral, and when the outside of a building shows what is wanted in the inside, the cathedral and the tinker's shop will not be quite alike, nor should the tinker's be decked with the same enrichments as the cathedral.

You know that architecture is the most difficult of the visual fine arts, yet there is much more labour spent on learning painting and sculpture than there is on learning architecture, and the votaries of these fine arts commonly have more natural aptitude to start with. We know the painful years students of painting and sculpture devote to getting the ground-work of their art, while from three to five years spent in an office, mostly in tracing, is thought enough for an architect.

Although I do not think that the test of examination is a very complete one, it is better than nothing; but yet the profession generally thinks even this too much, and utterly declines to start a complete one for Fellows, being afraid that a knowledge of the element of architecture may damp the ardour of Genius or clip its wings; while almost all the other professions have examinations for the two classes, and have consequently advanced at a much more rapid rate.

There are two points to which I beg to draw your particular attention—first, that architecture is a structural art, and that all an architect can do, as an architect, is to build: in his structures he has to show his knowledge, taste, and skill, his learning, morals, cultivation, and aspirations. The Mediæval architects in their ecclesiastical buildings showed their hopes and adoration by lanterns, towers and spires, by lofty naves, daring construction, and intricate patterns. When we have arrived at their pitch of knowledge and skill we must show our parts, inventions, and aspirations in similar ways, not as they did with almost pure geometrical figures, but with more graceful, refined, and daring work. Secondly, to point out the comparative scarcity of the use of coloured and glazed materials for external facings where the greatest beauty of colour and form may be used. It is refreshing even to think of London and other manufacturing towns presenting us with beautifully coloured fronts, that do not want painting every year, and would render such towns cheerful, if not delightful to look on, in the place of dingy, sooty, and depressing houses faced with stone, brick, or plaster; and this would not only raise our spirits under our leaden skies and drizzling rain, but be more healthful, for glazed pottery absorbs but little moisture, and is easily cleansed from soot and dust.

I am glad to see that we have admitted ladies to the Associateship, for that allows us to avail ourselves of the abilities of at least another half of the population, and, if you will pardon the ball, the larger half, as well as to offer small meed of justice to the fair sex.

#### THE COLE'S-LANE SLUMS.

##### JUDGMENT IN THE TAAFFE CASE.

In the Northern Police Court, on the 11th inst., Mr. Mabony gave judgment in the above case.

The Magistrate said that the summons was brought under Section 32 of the Housing of the Working Classes Act, 1890, and the question he had to decide was whether the houses 1 to 10 Taaffe's-row, were fit for habitation. It had been proved that the houses were without yards, and were without direct sunlight, or ventilation, save through the front windows. The only sanitary accommodation was four closets, in which sufficient means were not taken to ensure privacy. The houses were built back to back, thus excluding all light and ventilation from the rear, and seriously interfering with the circulation of air. This system of building was, according to the evidence of Sir Charles Cameron, now considered by all sanitarians to be unhealthy, especially in tenement houses, and would not be tolerated in new buildings. The stairs were narrow and dangerous, by reason of there not being sufficient light. The remedy suggested by the Corporation, and adopted in similar cases, was to remove certain of the houses, and in the spaces thus cleared to erect closets, provide yards, and also to provide apertures for ventilation in the buildings left standing. For the defence it had been contended that direct sunlight and yards were not necessary to render the houses fit for human habitation, and that many good houses were without them. It was further contended that the magistrate had no power to order the houses to be closed if the rooms of the houses were, in his opinion, fit for human habitation when inhabited by only two persons. Mr. Taaffe, had, however, fairly admitted that it would be impossible to limit the occupation of the rooms to two persons. Having visited the houses, he (Mr. Mabony) found them situated in a narrow passage between Denmark street and Cole's-lane, in one of the most congested areas of the city. The lowest floors were occupied by disused shops, and approach to the upper rooms was made by a narrow staircase with sharp turns, which made it difficult to ascend. The light was very defective, save when one of the room doors happened to be open. One such door was open as he

ascended, and he had then reason to appreciate the want of proper circulation of air. An effort had been made to remedy the closets by putting on new doors, but, in his opinion, these closets were not sufficient for the claims of decency. He was conscious that he was discharging a serious duty by any order interfering with the rights of the defendant; but, in the interests of the public health, he had no alternative. He was not without hope that Mr. Taaffe might, by making the necessary improvements, be recompensed for his outlay by higher rents from a better class of tenants; but meantime he would have to make an order prohibiting the use of the houses 1 to 10 Taaffe's-row, until, in the judgment of the Court, they should be rendered fit for human habitation.

Mr. White asked for costs for the Corporation; but Mr. Mabony refused, on the ground that the Corporation should have made the application sooner, and before putting Mr. Taaffe to £45 expense last October.

Mr. Taaffe said he had good reason to be thankful to his Worship for changing the practice of the Court, according to which four thousand houses had been closed in recent years, on a mere certificate.

#### THE WATERWORKS OF THE MADRAS PRESIDENCY.\*

In this paper was recorded the progress recently made in supplying water to the towns in the Madras Presidency, under the administration of the Sanitary Engineer to the Government of Madras. Between 1890 and 1896, thirty-four surveys for water-supply and twenty-four for drainage had been made in the fifty-eight municipal towns of the Presidency, of which twenty-one for water supply and eight for drainage had been submitted to the Government; twelve for water-supply and three for drainage had been sanctioned; three for water-supply were under revision; three for water-supply and three for drainage had been abandoned; and three for water-supply and two for drainage were under consideration. Of the twelve water-supply and three drainage schemes sanctioned for execution, nine of the former and three of the latter had been completed, and three of the latter were under execution. More than 26 per cent. of the towns had been dealt with in regard to water supply, and the works benefited more than 30 per cent. of the total town population.

Before describing the water supplies of Trichinopoly, Tanjore, Kurnool and Adoni, which afforded typical instances of those throughout the Presidency, the author dealt with such portions of the works as were identical in all cases, such as pipes, valves, fittings, fountains, &c. About 15 per cent. of lead-jointed pipes, and about 85 per cent. of turned and bored pipes were usually employed, the thickness being determined not only in reference to the maximum pressure, but in consideration of safety during carriage. Sluice-valves of the Glenfield type were adopted, and they were placed on pumping and gravitation mains, at distances not greater than 1,000 feet apart. Relief-valves, opening when the pressure was greater than the head between the calculated hydraulic gradient for the full supply and the level of the valve, were placed on all pumping mains; and air-valves were placed at all summits on distribution mains, except where the mains rose above the hydraulic gradient and the main was a siphon. The pumps were driven so that at no point should the pressure fall below 10 feet above the street level, with the full draught upon the main. From the average consumption in the case of works already opened, it would appear that a supply of 7 gallons per head per day was ample to meet all demands; but a supply of 15 gallons per head per day was aimed at. For determining the diameters of the pump-

\* By Mr. John A. Jones. Read at Meeting of Institution of Civil Engineers (London), on the 7th inst.

ing mains the author presented a graphic method, by which the most economical size was arrived at when the cost of the mains and the pumping charge were considered together.

For Trichinopoly, with a population of 88,276, a scheme had been carried out for the supply of 1,057,000 gallons per day. The works consisted of a series of wells, 15 feet in diameter, sunk to a depth of 25 feet below the bed of the River Cauvery, from which water was pumped into the mains through a screening-chamber. Worthington engines of the direct acting triple-expansion type, with surface-condensers, were employed, steam being supplied by Babcock-Wilcox boilers.

The Tanjore waterworks consisted of a filtration gallery constructed across the River Cauvery, with its floor about 8 feet below the river bed. It was formed of 9 inches of concrete, on which were laid double rows of inverted oval drain-tiles, with open joints. These were covered with washed gravel to a depth of 2 feet, and over this the river-sand was replaced until the ordinary bed-level of the river was reached. The drains discharged into a culvert along the lower side of the filter-bed connected with a pit in connection with the pump-well. The pumping-plant was similar to that at Trichinopoly.

For the supply of Kurnool the water was derived from the Kurnool-Cuddapah irrigation canal. The works were designed to supply 15 gallons per day per head to a population of 30,000, and consisted of a pumping-station, two settling-tanks, four filters, and a service-reservoir, with the necessary distribution system. The water was pumped by two direct-acting pumping engines, capable of delivering 315 gallons per minute against a head of 48 feet, to the tanks situated on higher ground about 3,000 feet distant, to which the water was delivered over a weir with a 90° notch to gauge the quantity derived from the canal. From the tanks the water was drawn through floating pipes, 9 inches in diameter, and conveyed to four filter-beds about 1,500 feet distant, with an area of about 3,000 square feet. It was then carried to the service-reservoir 90 feet distant, which was divided into two portions and had a capacity of 3,086 gallons.

At Adoni the supply was derived from an ancient irrigation tank, having a top water area of about 3,000,000 square feet, and a capacity of 20,000,000 cubic feet, and with a catchment area of about 3½ square miles. To provide the necessary supply the dam had to be raised 8 feet, the revetment of the inner face being removed and rebuilt. The tank was provided with a siphon outlet discharging into a channel alongside the filter-beds, and thence into the service-reservoirs of a capacity of 78,000 gallons.

#### RICHMOND LUNATIC ASYLUM.

The governors met on the 9th instant. A memorandum of inspection for the past year by Dr. E. M. Courtenay, Inspector of Lunatics, was submitted by the Medical Superintendent. In it reference is made to the many alterations and improvements that have been in progress during the year, notably the adapting of Grangegorman Prison for the accommodation of the patients. The male house had been improved by the relief of overcrowding, and the provision of more space for carrying on the various trades. It is further proposed to improve the building by the introduction of electric light and by re-fitting the general bath-room; but as yet nothing has been done with regard to the renewal of the floors, and the various other works required to raise the accommodation up to the modern standard; nor has it been possible to take further steps as regards the provision of hospital accommodation. A scheme has been for some time under consideration to add to and remodel for this purpose No. 11 block, so as to render it suitable for the treatment of the sick and

infirm. This building was originally designed as a hospital, but it is at present used for the accommodation of epileptics. Unfortunately the block as it stands is quite too small to meet the hospital requirements of the Richmond at the present day. Plans have been prepared for its enlargement and alteration, but as yet no decision has been arrived at as to the mode in which the accommodation is to be provided. During the year, only three deaths were ascribed to other than ordinary causes, and in each of these a coroner's inquest was held. During the period under review there were twelve cases of beri-beri, but the disease was of a very mild type. He (Dr. Courtenay) saw the patients at dinner in both male and female dining-rooms. The dietary throughout is on a most liberal scale. In the wards everyone appeared contented. A great advance has been made in the asylum as regards the employment of the patients by the introduction of various trades, such as weaving, mat-making and upholstery, and by the provision of additional machinery in the shoemakers' and tailors' shops. One hundred and seventy-six men are now employed at various trades, and Dr. Norman expects that in a short time he will be able to weave all the tweed required in the establishment. The staff of attendants has been reorganised, an additional class having been constituted, to be called probationers. These probationers will undergo a course of training in the care and nursing of the insane. The pathological department is well equipped and the scientific work is ably carried out by the pathologist, Dr. Rambaut.

Some discussion took place regarding the report, and it was ordered that it should be printed, and specially considered at the next meeting of the board.

#### NERNST'S ELECTRIC LIGHT.\*

BEFORE describing Nernst's invention, it may be profitable to spend a few minutes reviewing the position of electric lighting. The whole industry is at present controlled by the incandescent lamp. We are so accustomed to this, and it is taken for granted in such an unconscious way, that we do not realise how much everything depends on the maker of the carbon incandescent lamp.

In very early days, that is to say, in the early eighties, there were a few Edison lamps at 100 volts, with an efficiency too horrible to mention, but the Swan lamp came along made for 50 volts. I may say for 50 volts advisedly; I mean that the makers tried to make 50 volt lamps, and produced lamps taking from 40 to 60 volts. If the lamps were not bright enough you ran the engine faster, or put a smaller pulley on the dynamo. (The belt then generally slipped, but that is not to the point.) For about four years, which is a long period for the development of such a rapidly growing industry as electrical engineering, the makers of incandescent lamps, or in fact makers of the Swan lamp, decreed that the electro-motive force used should be from 40 to 60 volts. There was no appeal. There was no development of central station supply at that time, but still, even then in large buildings there was the longing for higher pressure on account of the cost of the name.

About 1885, the Swan 100 volt lamp came into use. It was a clumsy affair, with little loops of platinum at the sides. At first the lamps were pretty bad, but they gradually improved; and 100 volts, or in some cases 110 volts, became the recognised pressure for electrical supply.

As town lighting from central stations came into being, the limit of 100 became a serious trouble, and the evil was partly mitigated by the use of three or even five wire systems. I must point out that the incandescent lamp exercises its tyranny in two ways. It not only insists on a low pressure, such as say 100; and thus demands large

leads to feed it, but it is so sensitive to variations of pressure that the system of distribution has to be arranged to give a practically uniform pressure at the terminal of the lamp. The necessity for uniform pressure probably gives more trouble, and costs more than the mere low pressure; and it would be cheaper to supply at 100 volts with a good margin of permissible variation of pressure than supply of 200, with a very small percentage of variation.

Quite lately the incandescent lamp makers have produced things called 200-volt lamps, and some make them for 250 volts. So there is a general tendency on the part of supply companies to jump to a 200-volt supply. The innocent consumer is therefore pressed by the company to change over to 200 volts. The company likes the change very much, and the lamp maker also enjoys it, as he makes more lamps and charges more for them.

Considering the enormous importance of the incandescent lamp, its improvement has received extraordinary little attention. It limits us as regards pressure, it used to hamper us by its cost, it limits us as to variation of pressure, and it limits us very seriously by its inefficiency. Yet, in spite of these, the carbon incandescent lamp has made practically no advance in 15 years. Of course mere detail improvement in manufacture has taken place, and this has led to better quality and greater uniformity, hence cheapness; but there has been no radical improvement. The jump to 200 volts from 100, or from 50 to 100, did not depend on any sort of radical improvement in the incandescent lamp; it was merely the result of detail improvements, making it possible to produce long thin filaments. . . .

I have dealt with the question of high pressure incandescent lamps at some length because the subject is really of vital importance, and is too much neglected. Our technical colleges, and our technical press and our technical societies pay the greatest attention to questions of a per cent. or two in the efficiencies of dynamos and transformers, and give a good deal of attention to engines and boilers. That is because there is plenty of room for calculations in connection with these subjects; but the incandescent lamp, which at present holds the whole career of the lighting industry in the little curl of flimsy red-hot carbon that can hardly support its own weight, receives no attention at all. How much does the average electrical engineer know about incandescent lamps? The only subject that is treated in the same way is the cable. About half the money in town lighting goes in the cable, a mere fraction in the dynamos and transformers themselves; so the average electrical engineer knows nothing about cables.

So far I have only discussed the incandescent lamp; the arc lamp has also to be considered. I will not say much about the arc lamp just now, but will add a little more when the Nernst lamp is compared with it. The ordinary arc is limited in pressure to about fifty volts, including the series resistances necessary for regulating. The enclosed arc is a new development which is more satisfactory as regards pressure and as regards consumption of carbon.

The lamp I describe to-night is the invention of Professor Walther Nernst, of the University of Göttingen. Though he is a young man, Professor Nernst's name is already known to all modern chemists as a leading authority, and original thinker in the field of physical chemistry. It is unusual for a man who has climbed to the top of one tree to jump to the top of another.

Nernst's, like most great inventions, is exceedingly simple as soon as it is understood. The efficiency of an incandescent body, as far as radiation goes, depends simply on the temperature. The efficiency of an incandescent lamp, for instance, depends on the temperature of the filament only, providing there is no loss by convection. The carbon will not stand a sufficiently high temperature, especially as, in addition to its low specific

\* By Mr. James Swinburne. Read at Ninth Ordinary Meeting of the Society of Arts, on the 8th inst., and printed in its Journal.

resistance, the filament has to be long and slender, and thus weak. Nernst, therefore, chose a material that would stand higher temperature than carbon, and his material has the incidental advantage that its specific resistance is so high that strong rods can be used for high pressure instead of thin filaments. The most refractory materials so far used in lighting are zirconia, which has been used to replace lime in the limelight, and the oxides or so-called rare earths, in the Welsbach mantles. I am aware, of course, that many people suppose that the Welsbach mantle is not very hot, treating it as if it were at a temperature, for instance, below the melting-point of platinum. The light emitted is supposed to be due to some special power of selective emission due to the oxides employed. I have had a good deal to do with incandescent gas mantles, and I find no reason to suppose there is any magic effect of this sort going on. The part of the flame where the mantles hang fuses platinum wire easily, and very few materials can stand the temperature without fusing or volatilising. Lime and other oxides volatilise slowly from the mantles. I do not mean that the mantles are above the boiling-point of lime; I have some idea of its melting-point, as I have made a few pounds of melted lime and run it out on the floor to look at it. The Welsbach mantles, which are now chiefly thorium are at a temperature near their softening point and in the making are raised to a temperature at which they begin to soften.

Nernst takes highly refractory oxides as his material. It does not seem promising, because such oxides are notoriously good insulators. But such insulators are electrolytes when hot; Nernst, therefore, heats the rods to make them conduct, and then heats them electrically, preserving a temperature which is within the limits that the material can bear without softening. This means that he can take the most refractory bodies supplied by the whole range of chemical research, and can heat them to a temperature short of their softening point, and can thus get an efficiency unknown to workers on the incandescent lamp. Such efficiency also means whiteness of light, so long as the efficiency is not too high. Thus the crater of the arc being at a temperature of boiling carbon, gives a light that is unpleasantly blue.

The material is worked up into little white rods. Each rod is mounted on two platinum wires, a little paste made of refractory oxides being applied to the joints. The little rod with its two wires is then mounted in a holder which fits ordinary electric-light fittings. As the rods fall in resistance as the temperature increases, after the manner of electrolytes, an increase of current produces a decrease of resistance. This tends to give some instability in running in parallel on supply circuits. This instability is corrected, as in an arc lamp which has analogous properties, due to a different cause, by a serious resistance. The Nernst rod has therefore a resistance in series. This is made up of exceedingly fine wire, and for ordinary circuits amounts to 10 or 12 per cent. of the whole resistance of the lamp. The consumption, including the resistance, is 1.5 watts per candle for large lamps, and 1.6 for small lights or low pressures. In small or low-pressure lamps the loss of heat at the ends is larger in proportion.

Such a lamp as I have described will not light up of itself, for the rod is an insulator when cold. The simplest way to start it is to warm it up with a match, or better with a small spirit-lamp. Such lamp as this is not only very cheap as regards first cost, but very economical in running. The life of rods, running at an efficiency of  $\frac{2}{3}$  of a candle per watt, including the resistance, is already more than 500 hours in good specimens. If the Nernst lamp advances as much in the first few years of its existence as the carbon lamp did between 1880 and 1882, it will soon be made so well that the rods last a lifetime. When the rod is worn out a new rod with its wire mounts is all that is replaced. The whole lamp is not thrown away at all.

The method of lighting I have described, though it may be used in many cases, such as large public rooms, is really a savage mode of ignition, fit only for dealing with uncivilised commodities, such as gas and tobacco.

The small lamps and the lamps of medium size are in practice started by a heating resistance. This is arranged close to the rod, and in shunt to it. As soon as the rod is hot enough to conduct, its current works a tiny cut-out in the resistance circuit. In large lamps the heating system is a little more elaborate, as the resistance arrangement is arranged as a sort of hood which covers the rod. As soon as the rod conducts, not only is the resistance circuit broken, but the electro-magnet lifts the little hood clear off the rod. In all these forms, the rod and its mounting are replaceable without interfering with the rest of the lamp.

We now have to consider the part of the Nernst lamp is probably going to play in the near future.

Compared with the small incandescent lamps, as you deal with a material of much higher specific resistance, it is easy to give both small lights and high pressures. The question of lighting is exceedingly important though it appears trifling at first sight. People are so accustomed to lamps being turned on from the door without any further trouble, that they will generally object to having to light them with matches or spirit lamps, but there are many cases in which it will be quite satisfactory to have one lamp with an automatic lighter to show you the way into the room, the rest being lighted with matches or a spirit lamp as needed. There will be, however, a considerable opening for the cheap, small power, high efficiency lamp; and the disadvantage as to lighting is small in such cases as cafés, restaurants, churches, hotels, railway stations, and in short in most public rooms, is small.

Coming now to the next size, that is to say lamps of 20 to 200 candle-power, and even small lamps in which it is worth while to have automatic ignition, the first cost of such lamp will be higher than the first cost of incandescents, but as the rod itself has alone to be replaced, that is a matter of very slight importance. This size of Nernst lamp has further every chance of completely ousting the carbon incandescent on the score of cheapness, as to renewals, higher efficiency, better coloured light, and perhaps more especially high pressures. Once the Nernst lamp becomes so general that systems of distribution are laid out to suit it, instead of to suit the carbon lamp, the carbon lamp is practically "out of the running." It must be remembered that the Nernst can compete with the carbon filament at any pressure that suits the filament, but the Nernst lamp can easily go right out of the depth of the filament and have the higher pressures to itself. It must be remembered that at present the cost of cables in a system of distribution is an exceedingly large item.

Turning now to the large lamps, they compete with the arc lamp in efficiency. Of course the efficiency of the arc lamp is not a very definite quantity. The candle-power is generally determined by multiplying the current by two and adding zeros at discretion. All I can say is, that however many zeros the good-nature of the maker may supply, a Nernst lamp taking the same power gives a better light. When carefully arranged on the photometer, the arc may be better in given directions, but a lot of light given in directions that you do not want is not the same as the same light distributed with a uniform spherical emission. The arc lamps shown here will give the audience a good idea of the relative values. The Nernst gives a pleasanter, and of course a perfectly steady light. Coming to costs, the Nernst will be very much cheaper in first cost, but enormously cheaper in maintenance. It also goes quite away from the arc as to pressures. There is no trouble for instance in making large lamps to work in parallel at 500 volts

and by using double rods at 1,000 volts. This puts an entirely new development of electric lighting in the hands of the engineer.

O M 7

There is one point I have said little about yet. The incandescent lamp which is still with us, gives trouble not only because of the low pressure it needs, but also because it demands that the pressure shall be kept uniform. It seems quite possible that the Nernst lamp may be made to stand a much greater variation of pressure than the filament. If this proves true it means an enormous difference in the designing of distribution mains. I do not like to say much about this yet, as the invention is too young, and too little time has been available to make much certain progress in that direction. Results are promising, but it is best not to be sanguine.

It is difficult to discuss an invention like this without being carried away by enthusiasm. I feel, however, that I have but feebly shown forth the probable future of what seems to me the greatest invention in electric lighting that we have seen for many years. Still I am sure I have not been too sanguine.

#### NOTES OF WORKS.

Mr. J. Reid, Garristown, has been declared contractor for the erection of six labourers' cottages at Blanchardstown, for the Guardians of the North Dublin Union, at £900.

Messrs A. Sutton and Sons, South Mall, Cork, are about to erect new offices and store, under the directions of Mr. S. F. Hynes, F.R.I.B.A., architect, Cork.

#### TENDERS.

Graduates Tercentenary Buildings, Trinity College, Dublin. Mr. Thomas Drew, F.R.I.B.A., Architect:—

W. Beckett	-	-	£3,000	0	0
Bolton and Sons	-	-	8,000	0	0
J. Meade and Son	-	-	7,914	0	0
W. J. Campbell and Son	-	-	7,556	0	0
J. Beckett	-	-	7,359	3	0
J. Pemberton and Son	-	-	7,200	0	0
A. P. Sharp (accepted)	-	-	7,004	8	9

For the erection of a Cable Station at Waterville, Co. Kerry, for the Commercial Cable Company. Mr. J. F. Fuller, F.S.A., architect:—

D. Foley, Waterville	-	-	£5,450	0	0
Collen, Brothers, Dublin	-	-	5,050	0	0
Hemingway, Belfast	-	-	4,472	2	2
S. Hill, Cork (accepted)	-	-	4,349	0	0
Jones, Dunmanway	-	-	4,317	0	0
Healy, Tralee	-	-	4,296	16	8

**CLOCKS WITH MECHANICAL FIGURES.**—That curious class of clocks which work mechanical figures seems to have been known in quite early times. That in the north transept at Wells Cathedral is one of the most ancient examples we know. It is said to have been brought from Glastonbury Abbey, and does not in its present condition exhibit much in the way of architecture. Strasburg is the most elaborate specimen of the kind. The architectural portions are late third pointed work and Renaissance of various dates; the Gothic part bears some resemblance in arrangement to the fine example at Prague, but is later and less magnificent. It is, however, an interesting, though somewhat questionable, article of Church furniture; too much of the "puppet-show" order; the cock which flaps its wings and crows with a wooden tone of voice might be more appropriately perched outside the sacred edifice. Probably he is not a portion of the original design, as the structure upon which he roosts is later in style than the main body of the work. English examples where the figures strike the bell are not uncommon. At Rye Church the curious clock possesses two such figures, and the whole design is not unpicturesque. Perhaps the most celebrated example in London was formerly at St. Dunstan's Fleet-street, and is now partly preserved in the Regent's Park. It is by no means a handsome object; the "shrine" for the figures is far too like a summer-house. It would be by no means judicious to revive these acrobat clocks in our public buildings at the present day, and we cannot regard them as appropriate features in churches.—*Builder.*

## DUBLIN, WICKLOW, AND WEXFORD RAILWAY.

## HALF YEARLY MEETING.

In the course of his statement to the shareholders at the 105th Ordinary General Meeting, the Chairman (FREDERIC W. PIM), said:—

The return of traffic receipts for the half-year show that the improvement noted in the two previous half-years has continued; the total receipts having exceeded those of the corresponding half of 1897 by £4,733, and of 1896 by £8,622. The increase in the gross receipts from passenger traffic was £1,000, as compared with 1897, and £4,000 as compared with 1896. The merchandise traffic continues to show a progressive increase; the total receipts having been £3,800 greater than in the corresponding half of 1897, which was itself larger than any previous half-year. The expenditure side of the account shows a net increase of £1,850, a large proportion of which was due to the colliery strike, which, during the first three months of the half-year, obliged us to use inferior coal at a much higher price, involving a loss of upwards of £1,200. The actual expenditure on maintenance of way and works was nearly £3,000 less than in the corresponding half of 1897. Exceptionally large outlay, however, still continues, and must continue as long as the defence of the line from the sea makes such urgent demands on us, and until, by the completion of the relaying of the line with steel rails, the outlay on the maintenance of the permanent way has been brought to its normal amount. On the Kingstown line, nearly 2½ miles of the permanent way were re-laid during the half-year, leaving four miles still to be done. Of the other exceptional expenditure, about £3,000 was laid out on the coast line between Killiney and Wicklow. I am glad to say that no damage was done by the easterly gales in October to any of our new masonry or concrete work; but a breach occurred in an old retaining wall near Sanganagh Junction, necessitating considerable repairs. There is still a space of about 230 yards on this section as yet undefended with a retaining wall, and this is now being proceeded with. A great deal of work has been done in piling along the line below Greystones, and in the construction of groynes to check the stripping of the beach by south-easterly gales, such as took place last spring. This work is also being pushed on. No damage was done to the piling work already accomplished by the autumnal gales. Against these attacks of our ever-present enemy, the sea, there is no defence without constant watchfulness, requiring from our engineering department an unremitting attention. The chief part of the work for the replacement of the wooden bridge on Bray Head by a permanent structure of masonry and concrete, which I referred to at our last meeting, was accomplished and paid for during the past half-year. The bridge itself will be removed as soon as the season will permit. As far as the capabilities of our works will permit, we are making continual progress in the improvement of our carriages generally. Five complete trains have during the half-year been thoroughly overhauled and renovated. Of these, two are at work from Westland-row and one from Harcourt-street. The other two have been placed on the Shillelagh and New Ross branches. The Parliamentary expenses incurred were chiefly those for the opposition to the bill of the Tramway Company for increased speed on the Dalkey line; and the cost of our opposition to the company's subsequent application to the Board of Trade for their sanction to a speed of twelve miles an hour on that line, formed a considerable part of the law costs for the half-year. The final result of these proceedings was such as fully to justify the action taken by your directors, both in opposing the bill, and in resisting the application of the Tramway Company to the Board of Trade. Instead of a speed of twelve miles an hour being allowed over the

line, as sought for by the Tramway Company, the only extension granted was from a maximum of eight miles an hour to one of ten miles an hour, on the portion of the line between Haddington-road and Williamstown. The acceleration and improvement of the mail service *via* Kingstown and Holyhead has resulted in a very large increase of the total number of passengers carried, but I regret to say without any pecuniary advantage to the Wicklow Company. During the past year the total number of passengers on through tickets was greater than that of 1896 by upwards of 30 per cent. The addition of third-class to the mail trains on both sides has proved an enormous advantage to the public; but so great a transfer has taken place from first and second-class to third that the increase of our revenue derived from the increased number of passengers carried has been a mere trifle, and less than the additional cost of the longer and heavier trains now required for the service. The accommodation at the Carlisle Pier, and the junction therewith, is altogether insufficient for the work that already has to be done there, and is quite inadequate for such an extension of the service as the demands made on us call for, and which the development of tourist and other traffic, such as the public reasonably look for, requires. The pier at Holyhead, which is the property of the Government, has been from time to time improved, and the platforms lengthened and altered, at the expense of the Government, to suit each new requirement of the times, whether for mail or passenger service, and altogether it is probable that not less than £25,000 or £30,000 of public money has recently been spent at Holyhead to enable the service to be efficiently carried out there. At the Carlisle Pier the improvements effected since the commencement of the accelerated service by the Board of Works, though excellent as far as they go, have been substantially confined to those required for the better accommodation of the steamboat service. In the course of these alterations the platforms were lengthened, but the longer one is still only 640 feet long (whereas the platform on Holyhead Pier is nearly double that length), and the siding accommodation is at Kingstown most inadequate, considering that we have on the Pier and its approaches, to deal daily, morning and evening, with two separate trains, and on American Mail days with three, and sometimes on special occasions even with four trains. Moreover, circumstances occasionally delay the arrival of the incoming steamers, so that it has sometimes happened that we have had both arriving and departing traffic meeting together at the same time. The Carlisle Pier, and the branch line of railway connecting it with our line, is the property of the Board of Works, to whom we pay a nominal rent for the use of it; and we have not in fact any power to make the slightest alteration of any part of it without their permission. It is at present a single line between Kingstown station and the Pier, and is necessarily worked under considerable difficulties. Under these circumstances, we have made to the Treasury what I think everyone must consider the very reasonable request, that they will complete the one remaining link in the great mail and passenger route between the two countries, by widening the tunnel, and doubling the line between the Pier and Kingstown Station—so as to afford to us, as far as circumstances will permit, the accommodation for the performance of our share of the public service, which they have already afforded to the other sections of it. The whole cost of the alterations asked for, which, even when completed, will still leave the accommodation at the Carlisle Pier far short of that provided at Holyhead, would bear but a small proportion to the amount already laid out on the Holyhead Pier, and I have no doubt that her Majesty's Government will ultimately see the justice of our demand and the necessity for it in the public interest; but up to the present time I regret to say that the Treasury have not taken that

broad view of the matter which we had a right to expect, and have declined to accede to our request. At our last meeting I mentioned that in response to an application of the Midland Great Western Railway Company for a connection for their trains with the night mail steamers, we had made a proposition of a very moderate character, which I hoped would bring about an arrangement. I regret that this has not been the result as yet. Our offer was to give the connection asked for, we taking over and returning the Midland Company's carriages at Amiens-street junction for an annual payment of £500, which was, I think, correctly described as a very moderate sum.

## MISCELLANEOUS.

**PORTRANE ASYLUM.**—The warming, ventilation, and hot water supply of Portrane Lunatic Asylum has received careful consideration so as to secure the best and most improved appliances. Leading engineers submitted schemes, and eventually the plans and estimates of John King, Limited, engineers, Liverpool, have been accepted for their improved mechanical system, employing their Rajah ventilating radiators, rex air propellers, and patent tubular exhaust ventilators, involving a cost of nearly £20,000.

**A CLAIM FOR DISTURBANCE.**—An important case arising out of the street improvements in connection with the new Vauxhall Bridge, was heard at the London Sheriff's Court, last week. Messrs. Francis and Co., Ltd., cement merchants and manufacturers, of Cliffe (Kent) and Vauxhall, claimed over £40,000 from the London County Council as compensation for compulsory removal from their premises, the Nine Elms Cement Wharf. It was stated that they could not find a wharf at which their business could be carried on. The average annual profit was estimated at £8,800.

**BAD GAS.**—Nine complaints of bad gas in every ten are due to the inefficiency of the supply, and not to the inferior quality of the gas. This inefficiency may be due to faults in the gas company's fittings, or to faults in the consumer's fittings. The size of the service pipe from the street main to the consumer's meter may be too small, or the service may have become partially blocked with naphthalene, tarry matter, or water; or a ten-light meter may be retained where a forty-light meter should be fixed. In any of these cases the consumer should communicate with the company. But the fault which most commonly calls forth the complaint of bad gas, is the insufficient capacity of the service pipes within the building itself.—*Builder.*

**HISTORICAL MANUSCRIPTS OF THE IRISH FRANCISCANS.**—The following letter has been received by Sir Thomas Gratton Esmonde, M.P., from the Secretary of the Historical Manuscripts' Commission:—"With reference to your letter to me of the 30th October last, and to subsequent correspondence with the Chief Secretary for Ireland, I have now the honour to inform you that the Commissioners have instructed Mr. G. D. Butcher, of the Office of Arms, Dublin Castle, to put himself in communication with the authorities of the Franciscan Convent, Merchants'-quay, Dublin, with a view to his being permitted to prepare a report on the valuable collection of historical papers preserved there, to which you have directed the attention of the Commission. [A large number of the volumes containing these records were recently removed to the National Library, Kildare-street, and are accessible to the public.—ED. I.B.]

**TAYLOR ART SCHOLARSHIP AND PRIZES.**—The 25th prox. will be the last day for the reception of works for competition for the Taylor Art Scholarship and Prizes for the year 1899. The trustees of the will of the late Captain Taylor and the Royal Dublin Society announce the terms upon which the sum of £90, arising out of this bequest, will be offered for competition this year in a scholarship of £50, and three prizes of £15, £10, and £5, with a special prize of £10 for an optional work. Candidates for the scholarship and for the three other money prizes must submit for examination a work in one of the two following classes:—Class 1, for painters—a composition or subject picture in oil or water-colour, size not larger than 36 x 28 inches, and not smaller than 24 x 16 inches. The subjects for 1899 will be—for figure painters, "A Bather," and for landscape painters, "A Plain." Class 2, for modellers, a statuette not exceeding 36 inches in extreme height, the subject being "A Girl with Mirror." Competitors will also be re-

quired to submit a study of a head, life size, in basso relievo. These models must be cast in plaster of Paris, and the surface must not be coloured or bronzed, but if necessary the casts may be coated with a preparation of wax and turpentine without colour. In Class 3, which is for optional work, a special prize not exceeding £10, is offered to candidates submitting an optional work, illustrating any subject selected by themselves. In the case of painters, the size of the canvas must not exceed 36 by 28 inches, and in the case of modelers the cast must not be larger in extreme measurements than 36 x 24 inches. A student may compete in any one or more of these classes, but no student shall send in more than one work in any one class, save in Class 2, in which two works are specified, and the winner of the scholarship will not be eligible to receive any other prize. Works for competition must not be framed nor bear the student's name, and they must reach Leinster House not later than the day above named. The selected candidates not resident in Dublin will receive second-class return railway fare and a sum of 20s. for maintenance during their stay in the city. Any candidate selected for a prize may be called upon, should the judges so decide, to attend in Dublin for examination, the arrangements as to railway fare and maintenance being similar to those for candidates selected for the scholarship. Forms to be filled up by candidates and sent in with the works for competition may be had on application to the Registrar, Royal Dublin Society.

**NON-OPERATIVE OPERATIVES.**—If things go on much longer as they are, the word "operative" will acquire a new meaning, as signifying not a man who does work, but a man who refuses to do it; or it may be defined in future dictionaries thus:—"Operative—a man engaged and paid to do certain work, who endeavours to avoid doing it himself, and to prevent others doing it." Formerly one man endeavoured to do as much as another; now he endeavours to do as little as another. There is no meaner or more contemptible principle of life. We once heard it remarked with praise, of a man in a position of trust in the professional class—"he always does more than is expected of him"; and that is the honourable aim of not a few men in English professional and official life. It is such men as those who are universally trusted and respected, and in the end rise high. But the object of the "operative" seems nowadays to be, always, if possible, to do less than is expected of him; in other words, less than he is paid for. This appears, in fact, to be part of a system now; and we may hope that there are individual workmen who have a higher ideal of duty than that, and who would willingly do better than their associations will allow them to do. But if it is useless to appeal to the sense of honour of those who act on this kind of system, an appeal may perhaps be made with more success to their self-interest; if they can once be made to realise the fact that by cutting down work to a minimum they are cutting their own throats by destroying the trade which gives them a livelihood, they may perhaps listen to this argument though not to that of honour.—*Builder.*

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## THE IRISH BUILDER.

VOL. XLI.—No. 941.

## SAINT PATRICK'S DE INSULA :

A FURTHER NOTE ON THE SURROUNDINGS OF  
ST. PATRICK'S DE INSULA, DUBLIN. RESTO-  
RATION OF THE NORTH CLOSE, 1899.

At a stated meeting of the Royal Society of Antiquaries of Ireland, held at 6 St. Stephen's-green, Mr. Thomas Drew, R.H.A., Vice-President, read a paper on the above interesting subject, of which the following is a brief summary :—

The author said the whole of the lands known as the Liberty of St. Sepulchre, near Dublin, were in 1190 possessed by the Archbishop of Dublin, and on them was the Church of St. Patrick de Insula. The boundaries of the respective plots have been strictly maintained for seven centuries. They are still definable on the south, east, and west sides of the Cathedral in existing leaseholds, and were so on the north side until 1890. The Liberty of St. Patrick's, as created by Comyn, was walled and fortified, and dignitaries' houses were built. They were, however, not maintained. The exempt jurisdiction and property of the Dean and Chapter in the street traversing the ancient cemetery, and known to us as St. Patrick's Close, did not lapse until comparatively few years ago, and has for that interval vested in the Corporation of Dublin. It is now sought, under a bill promoted last session in Parliament by Lords Ardilaun and Iveagh and James Talbot Power, Esq., to establish an open park or city garden on the north side of the Cathedral. It is proposed by it, *inter alia*, to restore to the Cathedral its verge assigned by its founder, Archbishop Comyn, in 1190, held by it for successive centuries, and essential as a foreground to the dignity of this ancient and stately church which has been rescued, maintained, and restored to the citizens of Dublin in the past 30 years by private munificence. The veritable ancient Well of St. Patrick, where baptisms were traditionally said to have been performed by the Saint himself, was, on the authority of Archbishop Ussher, who saw it in his time, enclosed in houses standing on the North Close. Antiquaries of reverent instinct, and ecclesiologists, are hereby warned of a coming chance of recovery of this famous and sacrosanct Well, on the restoration of the ground some time desecrated as a public street, and within the area of the houses marked on my map as in possession of Henry Hunt, or Rotton, in 1750, removed by the Wide Streets Commission in 1824. Bearing in mind that the inevitable accumulation process in city bounds has in seven centuries raised the surface of the ground six feet, and perhaps more, above the ancient ground level, a hope may be entertained by the pious that the Well of St. Patrick is not lost for ever. It was seen by Ussher in Queen Elizabeth's day, and Malton, writing in 1790, took upon himself to say that it was still to be found under the hall of the house nearest depicted in his view of the west end of St. Patrick's. That it may be but covered up, and may be brought again to light, is not impossible.

The address was illustrated by a series of pencil views.

THE ROYAL  
INSTITUTE OF THE ARCHITECTS  
OF IRELAND.

A GENERAL meeting of the Institute was held at their rooms, 20 Lincoln-place, on Thursday, 23rd ult., at 8 o'clock.

Present—Messrs. C. J. MacCarthy, City Architect, in the chair; Albert E. Murray, A.R.H.A., Hon. Sec. and Treas.; C. H. Ashworth; W. K. Parry, M.A.; C. A. Owen; J. H. Pentland, R.H.A.; F. Batchelor; E. H. Morris; Walter G. Doolin, M.A.; J. F. Delany; J. Geoghegan; J. H. Lundy; F. Haghe, &c.

Visitors—P. F. O'Sullivan and M. J. Tighe.

A paper was read by Mr. W. K. Parry, on "The Pitfalls of Practising Architects" (part No. 1).

The paper was most interesting, and a long discussion ensued, the speakers being Messrs. W. G. Doolin, C. A. Owen, A. E. Murray, J. H. Pentland, and F. Batchelor.

A cordial vote of thanks having been passed to Mr. Parry, the proceedings terminated.

The next paper will be read on the 23rd inst.

## PUBLIC LIBRARIES.\*

Mr. Brydon explained that his object was to show, with as full illustrations as possible, something of what had been recently done in library building, so that one may learn what to follow in the future.

A suitable site was of primary importance. It should be central and prominent, yet quiet; ample in area to allow for future extension, have a good light all round, and last but not least, it must be dry. In shape it should, if possible, be rectangular; all awkward and angular sites are to be avoided, as, for their size, both costly to build upon and wasteful to work. It must never be forgotten that a library is a public building in every sense of the word; it is usually built by the public and used by the public, and therefore should be in as prominent as well as suitable position as can be obtained. Then, as to the building itself. Public libraries are, broadly speaking, of two classes—the purely reference library, such as that at the British Museum or the National Library of Ireland, where the reading-room is the architect's great opportunity for design; and reference and lending libraries (the circulating library of our friend Sir Anthony), combined with reading-rooms for newspapers and magazines. This latter is the truly popular library; everybody reads the papers nowadays, and therefore rooms must be provided where a man may walk in and out when he pleases to peruse any or all of the papers he has a mind to. It is manifest that in a free and open system such as this proper supervision is of the first importance, and the architect's first difficulty in this respect is usually the smallness of the official staff available for such a purpose. Mostly all libraries are understaffed—it is the constant complaint of librarians that they are allowed too few assistants—consequently the arrangements of the plan must be concentrated as much as possible. The officials must be able to supervise at a glance, so to speak, all the rooms to which the public have access. The ideal plan would therefore seem to be that which provides all the public rooms on one floor; but with sites of restricted area or libraries of any size this is not always possible, and therefore the rooms to which most frequent and rapid access is required, such as the news-room and the lending library, with such specialities as boys' rooms, &c., should be placed on the ground floor, leaving the reference-rooms and possibly the magazine-rooms, which are less frequented, to be accommodated on an upper floor. It is essential also that the access to all these rooms should be short, ample, and well lighted. The National Library of Ireland is one of the largest and most complete of our reference libraries

recently built. It was designed by Sir Thomas Deane, who had the great advantage of the advice and assistance of its late chief, Mr. William Archer, F.R.S., in planning the general arrangements. These, as well as its architectural treatment, will be understood from the plans and views so kindly lent me by the present librarian, Mr. Thomas Lyster.

The planning of a public library is not, however, a complicated problem. The requirements are comparatively few and simple, and lend themselves to a stately and architectural system of design from which some striking effects almost necessarily follow. It must be endowed with a fitting dignity both in plan and elevation. The reading-rooms, being large, give ample scope for the designer's knowledge of proportion. They should possess that quiet dignity of effect which can only be obtained by good proportion and restraint in design. Fussy little bay windows and other nooks and corners are uncalled for and out of place.

Respecting the lending department, the author considered that an architectural opportunity had been missed in many recent English libraries. Instead of being simply a book store, with a space cut off for the public, the latter might be treated as a hall or lobby by itself, as in some of the American libraries, notably at Boston. There the delivery room is 64 ft. long by 33 ft. wide, and 20 ft. high, and is decorated in the most sumptuous manner. Adjoining it is the stack room, to all parts of which application slips are sent through pneumatic tubes. The books come back to the alcove by means of a little electric railway with low wire basket carriages, running at the rate of 500 ft. per minute. The delivery room at the Edinburgh Public Library is modelled on the telling-room of a Scotch bank. The central space is devoted to the public, with counters round three sides, and alcoves behind them, for the storage of books. This arrangement gives scope for, and is treated with considerable architectural effect, a handsome hall being the result. The public library of the future will be the centre of culture and enlightenment of the district in which it is placed, and will wield an influence which must ever become wider and stronger. The building should be of such a character as to assist this influence. The suburban villa type, with its useless turrets and bay windows, should be altogether discarded—in short, the building should be endowed with that distinction of style and nobility of purpose which will render it an enjoyment and inspiration to all who hope for the growth of a living interest in architecture as a fine art.

Having briefly referred to the arrangement of rooms in libraries recently erected in the United Kingdom, plans of all of which were shown, the author turned to the great American libraries, describing in more or less detail the buildings, plan, and more notable features of the Congressional Library at Washington, of which an interesting historical sketch was given, the Public Library at Boston, the Columbia University Library, New York, and the Public Library about to be erected in New York.

In the Washington Library the American Government had commissioned American sculptors and painters—some fifty in all—to decorate broadly and thoroughly one of its great national monuments. The result was the most interesting record possible of the scope and capabilities of American art; not only sumptuousness of design, but richness of materials had been pressed into the service—marble, bronze, mosaic, fresco, and choice woods all bear their part. Staircase, hall, and rotunda, or reading-room, are a blaze of rich marbles and decoration. In the rotunda the columns and pilasters of the piers carrying the dome, are of red Numidian marble, resting on pedestals of dark purple Tennessee marble, their capitals being gilded. The screens between the piers are of yellow marble, and the portrait statues which surmount the balustrade are of bronze. The building is 468 ft. long from north to south, 310 ft. deep from east to west, by 72 ft. high.

\* Abstract of paper by Mr. J. M. Brydon. Read before the Royal Institute of British Architects, on the 20th ult.

The rotunda is 100 ft. diameter, 125 ft. high to the top of the dome, and 160 ft. to the domed ceiling of the lantern. The architects were first Mr. Smithmeyer, then General Casey, Mr. Bernard Green, and Mr. Pelz. The building cost £1,272,000 sterling.

The great architectural features of the Boston Library are the Staircase Hall and the Bates Hall—the former notable for its mural paintings by M. Puvion de Chavannes, illustrating Philosophy, Astronomy, History, Chemistry, Physics, Pastoral, Dramatic, and Epic Poetry. Bates Hall is the reference reading-room; it is 218 ft. by 42 ft., and 50 ft. high to the crown of its arched ceiling. It has accommodation for 264 readers at 33 tables. Sargent Hall, named after the eminent painter, is 84 ft. long, 23 ft. wide, and 26 ft. high. The ceiling is vaulted, and the hall is lighted from the roof. The decorative painting will be entirely by Mr. Sargent; the scheme, representing the Triumph of Religion, illustrates certain stages of Jewish and Christian history. Some of the work was shown at the Royal Academy in 1894. The interior court, another charming feature, is surrounded on three sides by an open arcade of white marble, similar in design to that of the Cancellaria Palace in Rome. In its centre is a marble fountain, set about with grass plots; along the walls under the arcade are low oak benches, so that on warm days the court may be used as an open-air reading-room. The building is a careful study of modern Renaissance, thoughtfully and lovingly carried out, reflecting the greatest credit on its architect, Mr. McKim, and the public spirit that called it into being. Many interesting facts and figures in connection with this library and the branch libraries at Boston were given by the author.

The third library called attention to—that of the University of Columbia, New York—was built and presented to the University by Mr. Seth Low, President of the University, as a memorial to his father. Construction and equipment have cost nearly £240,000. In plan it is like a Greek cross, with the great reading-room at the intersection of the arms, and covered by a dome. It has a magnificent approach of great terraces and steps leading up to a noble entrance portico of ten Greek Ionic columns. The entrance hall is adorned with splendid marble columns. The building, of which many interesting details were given, may be taken as an example of a typical university library worked out on modern lines to suit modern requirements—a utilitarian scheme artistically carried out.

The public library about to be built in New York was the subject of a limited competition last year, and copies of the successful design, lent by the architects, Messrs. Carrère and Hastings, were exhibited in the meeting-room. In its main lines it somewhat resembles the Boston Library, but in the instructions was this distinction, that though the authorities did not object to external splendour, they were rather disposed to favour a simple interior. The winning design had resulted in a good plan, and what promised to be a stately, dignified exterior. A marked feature is the raising of the building on a great terrace. The architects were not content with designing the building alone—it must have a dignified setting; so by means of broad flights of steps, terraces, fountains, and votive columns, the approaches were made to contribute to and enhance the effect of the architectural picture. This, the author thought, was a point to which more attention should be paid in buildings in England.

In conclusion, the author expressed the hope that these American works were not without their lessons for us in more senses than one—not only as libraries, but as public buildings. Would that some of the public spirit and the love of art which animated the founders and designers of those works could be transferred to the hearts of the City Fathers of London and our great provincial towns!

[The paper has been published *in extenso* in the Journal of the R.I.B.A. for the 25th of February. It is enriched by a number of fine illustrations, plans, &c.—Ed. I. B.]

#### NEW ARTS COMMITTEE FOR DUBLIN.

The Council of the Royal Institute of the Architects of Ireland, acting on the suggestion contained in the President's Address of the 16th December last, has appointed the following gentlemen to form a standing Arts Committee for the year 1899:—Messrs. J. Rawson Carroll (chairman), W. Kaye Parry, W. M. Mitchell, and C. A. Owen (hon. sec.), with the President and Hon. Secretary of the Institute as *ex-officio* members. This committee will concern itself with Public and Civic Improvements or Disfigurements, and Architecture threatened with demolition, degradation, or neglect. It will endeavour to effect its objects by suggestions and representations in the proper quarters, and by directing public attention to the same. The committee invite the co-operation of their professional brethren in this work, through information and suggestions. Communications to be sent to Mr. C. A. Owen, hon. secretary of the committee, 16 Molesworth-street.

#### FOREST WEALTH OF BRITISH COLUMBIA.\*

IN the consideration of the economic products of British Columbia, the timber wealth naturally takes a prominent part, as apart from minerals it represents the most important and readily available results. British Columbia may be said to possess the greatest compact area of merchantable timber on the North American Continent; and if it had not been for the great forest fires that have raged in the interior in years gone by, during which a very large portion of the surface has been denuded of its forests, the available supply would have been much greater than it is. As far north as Alaska, according to a recent report by the secretary of the British Columbia Bureau of Statistics, the coast is heavily timbered, the forest line following the indents and river valleys and fringing the mountain sides. Logging operations so far have extended to Knight's Inlet, a point of the coast of the mainland opposite the north end of Vancouver Island. Here the Douglas fir, the most important and widely dispersed of the valuable trees, disappears altogether, and the cypress or yellow cedar takes its place. North of this, cedar, hemlock, and spruce are the principal timber trees. It will be of interest to know that Douglas fir was named after David Douglas, a noted botanist who explored New Caledonia in the early part of the century. It is a very widely distributed tree, being found from the coast to the summit of the Rocky Mountains, and as far east as Calgary, and as far north as Fort McLeod. On the coast it attains immense proportions, sometimes towering 300 ft. in the air, and having a base circumference of from 30 to 50 ft. This is the staple timber of commerce often classed by the trade as Oregon pine. It has about the same specific gravity as oak, with great strength, and has a wide range of usefulness, being especially adapted for building purposes. It is scientifically described as standing midway between the spruce and the balsam, and in the opinion of the Dominion naturalist is a valuable pulp-making tree. Probably the two next most important representatives of the forest wealth are the red cedar and the yellow cedar. The former is found all over the province, but reaches its greatest development on the coast, where it out-girths all others. In addition to its commercial value for shingles and finishing purposes, it is the friend of the settler, inasmuch as out of its straight-grained logs he can build his house,

make his furniture, and fence his farm, and that with the use of the most primitive tools only. It is especially valuable, however, for interior finishing, being rich in colouring, and taking a beautiful polish. For this purpose it is finding an extended market in the east of Canada. Important as the red cedar is, the yellow cedar, though much more limited in area and quantity, is still more important and useful. It is very strong, comparing with the Douglas fir in this respect, is wonderfully durable, finishes to perfection, and grows to great dimensions. The cypress, which is found in great quantities in the interior of Vancouver Island, and on Mount Benson, near Nanaimo, comes within 1,200 feet of the sea. Towards the end of the island, on Queen Charlotte Islands, and on the north coast of the mainland, it is found lower down, and is very plentiful. It is out of the cedar that the Hydah Indians build their celebrated war canoes, some of which have an eight foot beam, are 60 feet long, and can stem the heaviest seas of the coast waters. Next comes the white spruce. Its habitat is principally low, swampy, and delta lands, usually interspersing the forest of fir and other trees, but in no place is it found on very large or compact bodies. From its comparative scarcity and the many uses to which it may be put, it is commercially more valuable than the Douglas fir. It attains a circumference almost equal to the latter, but does not grow so tall or so clear of branches. It is utilised largely in making doors, salmon boxes, barrels, fruit boxes, and many other similar purposes, being as it is, the best adapted for these uses of all the native timbers. It is *par excellence*, the wood for pulp manufacture, which is expected to become one of the most important industries of the province. Hemlock is a common timber, and up the coast is found in considerable quantities. It is a useful tree, and answers about the same purpose as the Douglas fir, and for that reason it will not be in general demand until the latter has become to some extent exhausted. White pine for cabinet purposes and general utility is very valuable, but is limited in quantity. Balsam is widely distributed, being found principally in river valleys, but is commercially of little value except for pulp. With the exception of the yew, and tamarack, of which there are several varieties, the foregoing are the representatives of the family of coniferous trees. Of deciduous trees, the large leaf maple, vine maple, alder, crab apple, oak, two varieties of poplar, or cottonwood, and aspen poplar, arbutus, birch, willow, and juniper, are the principal. The maple, alder, and arbutus make first-class cabinet woods, though they are not abundant enough to be extensively used for this purpose. They also make popular finishing woods. Poplar, or as it is most commonly called, cottonwood, will, it is expected in the future, be greatly used in papermaking. The aspen poplar is common in Vancouver Island and the northern interior of the province. It is also a good paper maker. The oak is mainly confined to the southern end of Vancouver Island. It is a stunted, gnarled species, of little use, but very picturesque. Crab apple is plentiful in swampy places, around ponds, beaver meadows, and along river banks. The hard woods are usually found in bottom lands and indicate fruitfulness of the soil. There is no part of British Columbia where the timber supply is not sufficient for local demands. There are over eighty sawmills in the province, large and small, with a daily capacity of about 2,000,000 ft. mainly on the coast, but the limit has never been reached, the annual cut running between 50 and 100 million ft. Various estimates have been made of the amount of timber in sight. These range between 40 and 100 billion ft. The average of timber under lease is about 1,175 square miles, and the total area of forest and woodland is put down by the Dominion statistician as 285,554 square miles, but this must not be taken as all of commercial value, as

\* From *The Journal of the Society of Arts*.

much of this is covered with small trees suitable only for a local supply of fuel and lumber. The future of the lumber industry in British Columbia is very promising, and when foreign demand fully revives, and the Nicaraguan Canal has been completed, it cannot fail to receive an immense impetus.

### MUNICIPAL TRADING.

THE London Chamber of Commerce has (says a contemporary) been aroused to alarm by a survey of the Private Bill legislation, of which notice has been given for the present session of Parliament. No less than "seventy local authorities have publicly advertised notice of their intention to apply to Parliament or the Board of Trade for powers to manufacture and sell dynamos and other electrical fittings." It is this growing disposition on the part of municipalities and other local authorities to enter into competition with private traders, including their own ratepayers, with capital raised upon the rates, that has excited the concern and remonstrance of the Chamber of Commerce. Now, the question of the legitimate scope and limits of municipal enterprise is always a difficult one, and it is hard to say where the line should be drawn. There are certain undertakings, such as lighting, water supply, and the tramway system, that are held to be fit subjects for municipal control, not only because they supply universal and primary wants, but because they involve interference with the streets, which are vested in the community. Some of these undertakings are often with propriety left in the care of public companies—though the day of company administration in such matters seems to be drawing gradually to a close. But when private enterprise can no longer satisfy the public needs, the municipality is justified in assuming the control. An instance in point is the provision of houses for the very poor. But, beyond the actual need, municipalities should be careful not to step, for they are the trustees of the public purse, and trade is inevitably associated with a certain element of risk, which they are not entitled to incur merely in the hope of being able to effect a little saving in the price of their commodities.

### DAMAGE TO COUNTY ROADS BY A TRACTION ENGINE.

At the final meeting, on Wednesday, of the Grand Jury of the County Louth, Mr. P. J. Lynam, County Surveyor, presented his half-yearly report. From it we print some passages in connection with road-damage by a traction engine, the property of a syndicate:—

In August last, the Greenore Granite Quarries Syndicate, Limited, informed me that they intended to construct three-quarters of a mile of tramway alongside the county road, from their quarry to the Bush railway station. The tramway (which would have cost about £1,500) has not been made, and, instead, the syndicate have adopted the cheaper plan of carrying stones in a pair of wagons drawn by a road locomotive making two trips per day over 4½ miles of county roads from their quarry to Carlingford harbour. In about four weeks' work previous to December 24th last, when the locomotive stopped running, the roads were damaged to the extent of £400. For more than half a mile the six-inch deep stone crust of the road was quite broken up, and deep trenches were cut in the underlying clay, which soon became a mass of puddle. When the road near the Bush became impassable the locomotive was sent round by Grange, injuring another 1½ miles of the road. When a culvert was broken down on the Grange road, the locomotive was sent round by Crossalaney, injuring another 2½ miles of the road. In addition to the direct road to Carlingford, the syndicate have at their mercy another 18 miles of roads to Carlingford and to Gyles

Quay. The road contractors on the 4½ miles of direct road to Carlingford are paid £48 per annum. They delivered the contract quantity of broken stones value for £24, and they kept the roads in good order up till November last, when the supply of stones was exhausted. Applications made in the usual manner for £170 to supply extra stones were rejected at Special Sessions, on the grounds—I think—that the damage already done was out of all reasonable proportion to ordinary wear and tear, and that it was impossible to estimate for future damage by an unknown number of locomotives over 22½ miles of road. Your solicitor took counsel's opinion, to the effect that the syndicate have a right at law to run their locomotives over any roads they please, and that the damage done to the roads must be repaired (if to be repaired at all) at the expense of the ratepayers. This bad state of the law was remedied last year in England by an Act which does not apply to Ireland; but counsel also advises that if persons along the roads have suffered special damage from the condition to which the roads have been reduced, any one of them, or any of them jointly, may institute proceedings in the Chancery Division against the syndicate, and counsel does not see what possible answer there would be to the action. The syndicate have served me with notices of actions at law, because for some weeks the roads were impassable for their locomotive; also they offered to supply stones and labour at their own expense. It was a reckless thing to run this locomotive in December, when the roads were very soft. Now, or during the summer, a locomotive does comparatively little damage. If the Grand Jury wish to encourage a local industry at the expense of the ratepayers, partly because the damage must be repaired at the expense of the ratepayers, and if the syndicate were to put into a favourable shape their vague offer to supply stones, &c., and if they would undertake to use only four and a-half miles of direct road, then it might be advisable to present a reasonable sum of money for extra stones to keep the roads in repair up to September 30th next.

P. J. LYNAM, County Surveyor.

Mr. Macardle appeared for the contractors for the roads in the Lower Barony referred to by the County Surveyor. One road in particular was concerned, and he suggested that the Quarry Syndicate should come to an arrangement with the contractor to supply extra stones, &c.

The County Surveyor said Mr. Macardle referred to half a mile of roads from the quarry to the Bush, which is like a ploughed field at present. He thought it would be better to leave that as it is as far as the Grand Jury is concerned, and let the syndicate arrange with the contractor if they wish. What he would suggest would be an extra expenditure on the road from the Bush to Carlingford—a distance of 4 miles—on which he would suggest that they should spend £150. By keeping that road in repair they would keep this traffic off the other roads.

Mr. Rogers advised the Grand Jury that the road contractor had a remedy against the syndicate—he could apply to the Court of Chancery for an injunction and damages, and would probably get them. There was no use in supplying extra stones to repair the road, and have it all torn up again immediately by the spikes in the wheels of these traction engines.

The County Surveyor said it was impossible that a poor man like the contractor could keep the road in repair under the circumstances for the sum agreed in the contract.

The contractor said he would give up the road altogether.

Mr. Rogers said that he presumed that, as long as this exceptional state of things continued, the Grand Jury would not prosecute the contractor. He understood the road was in a very bad state, and the contractor ought to be able to make out a case against

the syndicate. The latter was a body with plenty of money.

The foreman said he would suggest that the several contractors interested should combine to take action against the offending syndicate.

### CORRESPONDENCE.

#### THE FAMILY OF CASH.

TO THE EDITOR OF THE IRISH BUILDER.

SIR,—I would be greatly obliged to any reader of your paper who will assist me in connecting the following persons:—

1. Thomas Cash, of Cavausport, Dublin. Will dated 1729.
2. John Cash, of 34 Rutland-square, and Belville, Rochestown, Sheriff of Dublin in 1799, and Lord Mayor in 1813-14, who married, in 1783, Isabella Tudor, presumably a daughter of John Tudor, Sheriff of Dublin in 1805, and sister of a John Tudor.
3. The Lord Mayor died in 1833, and is interred in St. Werburgh's along with his wife, who died in 1829. They had, *inter alios*, Lieut.-Col. Henry Cash, of Belville, and John Cash, of Esker House, Lucan.
3. Jane Cash, married in 1784 to Thomas Jack.
4. Mary Cash, married in 1785 to Christopher Fortescue Bates.
5. Edward Cash, of Ballymacaret, Belfast (?), who married, about 1795, Rosanna Maxwell, said to have been of Drumbo, Co. Down.

A copy of the inscription on the tablet to the memory of this Lord Mayor, in St. Werburgh's, or a description of his armorial bearings (if any), would be most acceptable, or say if he had brothers, and their names.—Yours, &c.,

WM. JACKSON PIGOTT,

Manor House, Dundrum,  
Co. Down,  
1st March, 1899.

### IMPROVEMENTS IN DIOPTRIC APPARATUS FOR LIGHTHOUSES.\*

THE paper was devoted to a description of the advantages secured in practice by the *feux-éclairs*, or "lightning lights," introduced by Mr. Bourdelles in 1890, and to an investigation of the financial aspect of improvements effected, from which it appeared that a more efficient and characteristic light was obtained at a greatly reduced cost.

It was universally admitted that, sufficient power being granted, the fixed light was, from the point of view of visibility, the light *par excellence*. It was kept constantly in view, and a bearing could be taken from it and a course steered to it with absolute certainty when it was once picked up. The same statement could not be made with reference to a slow revolving light; there was so long a period of time between light and darkness that the sailor was apt to lose patience; and if he happened to miss one or more flashes from any cause—as, for example, the vessel falling into the trough of the sea, or from the obscuration of the light by masses of spray, or even possibly by a passing vessel—his nerve might become unstrung, he wavered, and a disaster might result. This danger and difficulty the *feux-éclair* readily surmounted, as its lightning flash or flashes, occurring every five seconds with persistency, rendered it for all practical purposes a fixed light, while it conferred the further advantage of a positive characteristic.

There was a waste of light when it was allowed to rest on the eye longer than the time necessary for complete perception, which period was 1-10th second. Light might be economised so that greater intensity should be given to the beam emanating from the apparatus. This was the underlying principle which governed the system of illumination

\* Abstract of Paper by Mr. W. T. Douglass, M.Inst. C.E., and Mr. J. A. Parves. Read at meeting of Institution of Civil Engineers (London).

by feux-éclairs. Elaborate experimental investigation had been made, notably by Charpentier, to determine the exact time which an intense ray of light falling on the retina required for full perception. This time was set down at between 0.08 second and 0.125 second. A mean between these periods was accepted for working purposes, and the French lighthouse service accordingly fixed the standard duration of a flash at 1.10th second. In future, therefore, this law would determine the maximum effect of an optical apparatus, and any "wire drawing" of the flash beyond these limits would mean want of economy and a diminution of the efficiency of the light. In both systems it was equally easy to produce group-flashing lights by the simple expedient of breaking up the faces of the panels.

The commercial aspect of these new lights, dealt with in three tables, are calculated from Mr. Allard's formula. As is well known, the actual candle-power of a light as arrived at by photo-metric experiments is much less than that given by this formula. The object of the authors in giving these tables was, however, to institute a comparison between new and old forms, and for this purpose Mr. Allard's formula was available. The undesirability, from an economic point of view, of using the old form of apparatus, was rendered obvious. Compared with hyper-radiant apparatus with six sides, feux-éclairs of the first order, with corresponding two panels of 155°, showed a saving of no less than £1,784 was effected; while, compared with a hyper-radiant with three sides, each side giving a group of two flashes, feux-éclairs, with group of two flashes, two panels of 135° each, First Order, showed a saving of £3,000.

The new system of feux-éclairs apparatus, in place of the hyper-radiant, could thus be employed with a great saving of cost. Thus, instead of the gigantic and expensive hyper-radiant, such an apparatus as that installed during the course of last year at Armen on the west coast of France, could be set up. This apparatus was of the Second Order, and the luminary was an incandescent gaslight. The gas was formed from mineral oil, and was under pressure. The light of this apparatus was equal to no less than 300,000 candle-power, while its cost, including rotary mechanism, mercury bath, lamps, &c., amounted to £1,920; while the cost of a hyper-radiant of equal candle-power would be £5,696. Should a greater candle-power be desired, all that was necessary was to adopt the double apparatus system now used in France, a sample of which was that of L'Ailly, now being installed at Dieppe, the candle-power of which was 600,000. The authors proceeded to describe and illustrate further developments of the system they had designed.

This novel system possessed many advantages from an economic point of view. It permitted of small apparatus being used with small lanterns and accessories. It rendered the use of smaller burners possible, and consequently reduced the consumption of oil. One standard form of apparatus would serve every purpose. New designs would not need to be prepared for every new light, and therefore new and expensive dioptric elements would not require to be calculated, moulded, and ground. Any desired alteration in characteristic could easily be made by altering the cam attached to the eclipser. It might further be remarked that, by using such a standard light as, say, a Third Order for first, second, and third-class lights, sailors would not be perplexed by the endless and uncertain variations of the power of lights as given in the Admiralty List. All lights would have the same intensity of beam whatever the number of flashes. All would have an equal luminous range in clear weather, and penetrating power in fog, and all an equal geographical range so far as power of light is concerned. The advantages to be derived from this system might be summed up in a few words. (1) Greater characteristic distinctiveness. (2) Greater characteristic distinctiveness with no loss of power. (3)

Reduction in first cost. (4) Reduced maintenance. (5) Simplicity of design and construction. (6) Equality of power and efficiency of all lighthouses. To obtain the rapidity of rotation necessary for the lightning lights, it was imperative that some new kind of rotatory carriage should be found. The mercury float mechanical movement devised by Mr. Bourdelles, consisted in bearing the optic on a bath of mercury, the pressure of which counterbalances the superposed apparatus. A spindle, borne on a pivot, maintained the apparatus in a central position, or instead of the spindle, horizontal rollers may be employed. The resultant was great uniformity of speed in combination with a constant of resistances, and this too without the introduction of numerous working parts.

#### CARVED OAK SCREEN, HOLY TRINITY CHURCH, CHESTER.

A HANDSOME carved oak screen, dividing chancel from nave, has just been erected at Holy Trinity Church, Chester. It is interesting as being the only chancel screen at present in any church in the city. It is of fourteenth century character, and light in design. There is a wide central doorway with four bays on either side, all surmounted by crocketed gables, the middle one being carried considerably higher than the others, and crowned by a cross. A marked feature in this handsome screen is the large number of carved statuettes that occupy the niches (all cut in the solid timber), upon the eastern as well as the western face.

The following is a brief summary of these figures and their meaning:—Beneath the cross, looking east and west, is an angel bearing a scroll, on which the "Per Sanctus" is inscribed, connecting the screen with the dedication of the church. Within the chancel are twelve angels, the six on the south side illustrating the Ministry of Angels in relation to the Redeemer:—(1.) The Archangel Gabriel—the Angel of the Annunciation; (2.) The Archangel Raphael—according to an old tradition the Herald Angel; (3.) Angel ministering to our Lord after the Temptation; (4.) The Angel of the Agony; (5.) Angel of the Resurrection; (6.) Angel of the Ascension. On the north side the figures illustrate the Ministry of Angels in relation to the Redeemed. (7.) The Angel of Revelation; (8.) The Angel of the Seal; (9.) The Angel of Prayer; (10.) The Angel Reaper; (11.) The Archangel Uriel bearing the emblem of the sun, and alluding to the state of the Redeemed after the Angel Reaping—"Then shall the righteous shine forth as the sun"; (12.) The Archangel Michael, with sword of flame and dragon chained—the final triumph of the Redeemed. On the nave side of the screen, facing the congregation, are twelve saints, all chosen for reasons local to the parish:—(1.) S. Patrick (S. Patrick's Chapel or ile in the old church); (2.) S. Guthlaie, patron of fens and marshes (Sealand in Trinity Parish); (3.) S. Francis, founder of the Grey Friars (Grey Friary formerly in this parish); (4.) S. Martin (a part of ancient parish of S. Martin, now incorporated in Trinity); (5.) St. Chad (an old chapelry so dedicated formerly in Trinity Parish); (6.) S. Luke, the beloved physician (Infirmary and New Fever Hospital in the parish); (7.) S. Mathew, called from the receipt of custom (the Custom House formerly adjoining the church); (8.) S. Alban (Weaver-street originally S. Alban's-lane); (9.) S. Nicholas (chapelry so dedicated formerly in Nicholas-street); (10.) S. Dominic, founder of Black Friars (Black Friary once in parish); (11.) S. David, patron of Wales (the parish borders for about 3 miles on Welsh church); (12.) Blessed Virgin Mary (south aisle of old church, known as "Lady Chapel" and "S. Mary's Ile"). The gates are of wrought iron.

The architects are Messrs. Douglas and Minshull, Chester. The screen bears the following inscription:—"To the honour and

glory of God and in loving memory of Edward Marston, Priest, M.A., Rector of this Church and Parish of the Holy and Undivided Trinity, Chester, from 1862-1895, during whose incumbency the parish church was re-built, the schools erected, and many other good works performed, this chancel screen is dedicated by parishioners and friends."

The work has been carried out and placed *in situ* by Messrs. Harry Hems and Sons, the church sculptors, &c., of Exeter.

#### ROAD-MAKING METHODS AND APPLIANCES.

IN connection with the forthcoming Exhibition, to be held in the Royal Agricultural Hall, London, it is proposed to have an Irish Sub-Section in connection with "The Surveyor," as stated in Mr. R. H. Dorman's letter, which we print. The effort will, we hope, prove successful in again bringing before our English friends the excellent materials, which can be procured in Ireland, for Road-Making and other purposes. Mr. Dorman writes:—

TO THE EDITOR OF THE IRISH BUILDER.

SIR,—I am trying to get up an Irish Sub-Section in connection with "The Surveyor" Exhibition of road-making Methods and Appliances, to be held in the Royal Agricultural Hall, London, from 26th April to 6th May next. If you would be good enough to refer to the matter in your paper, and so bring the proposed Exhibition under the notice of the public, I should feel extremely obliged.—Yours, &c.,

R. H. DORMAN.

A circular just issued furnishes the following particulars, which will be read with interest:—

The promoters of "The Surveyor" Exhibition, recognising the value of the minerals available throughout Ireland for road-making purposes, are anxious that these products should be brought more prominently under the notice of engineers and others connected with county and municipal work in England. It appears to the promoters that if the better class of quarries in Ireland were properly developed, suitable machinery provided for the quarrying, breaking and dressing of stone, and a system of cheap railway and cross-channel rates established for the conveyance of stone, a large trade might be developed with England. With this object in view, the promoters propose having a special Sub-Section of "The Surveyor" Exhibition for the purpose of exhibiting Irish products suitable for road or street construction and maintenance, or used in connection with same. A small charge will be made to trade exhibitors, in order to cover expenses of rent charged for floor space, &c., but no charge will be made to local authorities or officials who exhibit. Meetings will be held and papers read and discussed, dealing with road and street construction during the Exhibition, and a carefully-prepared catalogue of the various exhibits will be printed. While particularly referring to quarry products, the promoters have to express a hope that Ireland will not be behind-hand in exhibiting in the other branches appertaining to road and street maintenance. Further particulars with reference to the Exhibition may be obtained from the Editor of "The Surveyor," 24 Bride-lane, Fleet-street, London, E.C., or with reference to the Irish

sub-section from R. H. Dorman, County Surveyor, Armagh.

Amongst the Divisions of "The Surveyor" section the following are tahled for the information of intending exhibitors:—Stones used for pitching; various kinds of dressing to stone setts; methods of laying stone pavements; methods of pitching at intersecting roads; various woods; specimens of wood pavement laid with different joints and grouting; specimens illustrating wear of wood pavements; creosoting; specimens of wood blocks treated by various preservatives; apparatus for impregnating wood blocks; asphalt samples from different mines; sections of roads laid by different makers; tar macadam; bricks; samples of carriageways laid with bricks; samples of bricks showing wear under traffic; India-rubber; cork.

### CARRICKMACROSS WATERWORKS.

At their meeting, last week, the Guardians of Carrickmacross Union had before them a certificate from the engineer (Mr. P. F. Comber) for payment to Hegarty and Gault of £400.—Mr. Fennell: I hear many competent men saying that the intake well was not properly done, neither was the reservoir! We have as smart a man as any engineer taking an interest in it, that's the chairman of the Town Commissioners—Mr. Duffy—and I would back him in his opinions.—Mr. Daly: If the work is done according to specification, we can't go beyond that.—Mr. Fennell: I don't pretend to know anything about the work, but I hear the intake well is not deep enough.—Mr. Marron: A fool's advice is good enough at times! I suggest that the Waterworks Committee of this Board invite Mr. Duffy and the other Town Commissioners, and take the specifications with them, and inspect the works.—Chairman: We can discuss things with the engineer. Mr. Daly: Certainly. Are unskilled men going to dictate to an engineer? Insults have been hurled at the guardians over the waterworks. I fling them back. I propose the committee, with the Town Board, inspect the works on Friday next.—Carried.

### NOTES OF WORKS.

A chancel has been added to the parish church, Clontarf, Co. Dublin. It is about 24 feet in depth, and is floored in marble mosaics, a quadrefoil forming the centre-piece. About 130 sittings have been added to the church by the extension. A kerb stone of red Cork marble has been erected around the communion-table, and the interior of the sacred edifice has been embellished by two lancet windows in the Gothic style. A new porch has been erected, in Bath stone. The roof consists of panelled pitch pine sheeting to match the roof of nave. Eight clergy stalls have been placed within the chancel, and seating accommodation for a choir of forty-two persons has been provided. The cost was about £1,500. Mr. J. F. Fuller, F.S.A., was the architect, and Mr. R. F. Lidwill, J.P., the contractor.

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WANTED—Copies of *The Dublin Builder* for July 1, 1862; and of *The Irish Builder* for May 15, 1877; September 15, 1877; January 1, 1880, for which published price will be given, at Office, 42 Mabbot-street.

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## MISCELLANEOUS.

**THE NEW NILE RESERVOIR.**—The first stone of the new Nile reservoir has been laid by the Duke of Connaught, in the name of the Khedive. This is the great work undertaken by Messrs. Aird and Co., as contractors, and it is to be completed in five years from last July. The cost is to be £2,000,000, and it is to be covered by easy payments to the contractors extending over a period of thirty years. But the canals and drains to carry the water throughout the country will cost nearly as much again. Yet, according to the estimate accompanying Lord Cromer's Report, the new waterworks will mean an annual increase in the wealth of the country of about £2,750,000, and a direct annual benefit to the State of £378,000. Beside that, the Government will benefit by the sales of unreclaimed land, to the extent of over a million sterling.

**STRIKE OF PLASTERERS.**—We (*Timber Trades Journal*) have from time to time drawn our readers' attention to the action of the plasterers in their attempts to organise a strike on one of the most trivial questions that has ever been brought under public notice. We can understand men in times of activity making a battle-cry of wages or hours of daily work, but to raise a hubbub and throw themselves and their families on the parish, because the masters object to allow them to harass and annoy men at work who do not belong to their union, is a childish piece of absurdity which the plasterers' union cannot possibly hope to carry to success. The master builders have adopted a determined attitude, but after a good deal of forbearance and explanation with the representatives of the operative plasterers, at a meeting of the National Association of Masters, held in London this week, it was decided to declare a lock-out against the members of the National Association of Operative Plasterers on Monday, March 6th. As there are 12,000 members of the Plasterers' Union, with a fund of only £20,000, unless aid is forthcoming from other societies, the issue cannot be long in doubt.

**ELECTRIC LIGHTING IN BATH.**—Alderman Taylor presided at the fortnightly meeting of the Electric Lighting Committee, held at the Guildhall on Thursday. Mr. R. Hammond, consulting engineer, reported that he and his assistants had made exhaustive tests of the new engines, etc. There were 22 guarantees in the specifications, and he was able to report that the whole of these guarantees in respect of the engines had been complied with. They were tested 15 per cent. beyond the guarantee. The new engines were wonderful in their economy, and, although they provided eight tons of coal for the test, they only used a little over three tons. Whatever the increase in load might be in the coming year, within reason it would be carried at a lower coal bill than was incurred last year. The engines were the most economical ever tested in this country on electrical work. One had a steam consumption of 22·78 and the other 23·42. Under the specifications they would have to pay the contractors over £800 in bonuses for this extra efficiency. It was stated that the stokers on the occasion of the test were supplied by the contractors. Ordinary coal was used, and Mr. Metzger said he was certain he could get the same results from the engines. He thought they would save £400 a-year by the reduction of coal consumption. —Mr. Metzger said in the test the engines were running at full load, which was the most economical way. They would probably run them only at three-quarter load. —Mr. Bush raised the question whether the bonus would not be reduced by fines payable by the contractor for not delivering the machinery in time? —Mr. Hammond said that question had not been lost sight of, and it was agreed that it should be discussed by the Works Committee.

**THE HEAT OF THE MOON.**—At the Camera Club, last week, Lord Rosse gave an account of his researches on the radiant heat of the moon. He exhibited a number of diagrams showing the variation of heat with the various phases of the moon and with its height in the sky. No appreciable heat, he said, came from the interior of the moon, all being derived directly from the sun. The sun's heat, however, was not simply reflected from the moon's surface, but was absorbed and then re-emitted. In an eclipse the moon's heat and light seemed to vary equally, there being a slight lag in the heat, but after the eclipse was over the moon did not reach the full-moon standard of heat for a considerable time; even an hour and three-quarters after the last contact with the penumbra it had not completely recovered. He could suggest no satis-

factory explanation for this unexpected phenomenon. He then proceeded to describe the construction and use of the apparatus used in these investigations. This consisted of the 3 ft. speculum at Birr Castle with a delicate thermal couple arranged at the focus so as to receive the concentrated rays of the moon, the temperature indications being obtained from a galvanometer. The subject had not been much worked at in this country, but in America Professor Langley had done a good deal with his bolometer. As to extension of observations, more sensitive instruments were required. But these involved difficulties. For instance, there was the trouble of keeping the indicating spot of light of the galvanometer on the scale; a passing cloud would send it completely off the scale if the instrument were made very delicate. As to the possibility of making similar observations of other heavenly bodies, the step was certainly a long one, and seemed rather hopeless with present apparatus.

**ANCIENT BURIAL VAULTS.**—In most of our great towns there exist vast collections of coffins piled up in the crypts of churches, a vastly bequeathed from the times when our forefathers had not realised the elements of wholesome environment. Such burial vaults still abound in the metropolis, where the size of the population and the lack of proper cemeteries made them in former days especially convenient and lucrative. Last week no less than 200 coffins were discovered stowed away beneath a Friends' mission-house at Limehouse, the date of the latest burial being 1856. The Home Office has taken the matter in hand, and it is to be hoped that their efforts will be more speedily successful than in a very similar case of the Parish of St. George the Martyr, Southwark. Last summer (as readers may remember) London was startled with the news that some 1,500 to 2,000 coffins were lying in the vaults beneath the church of that ancient parish. After sundry official proceedings an order for removal was sent to the vestry by the Home Office. Six months later no action has been taken by the local authorities, and, if we are to believe the assertion of the newspapers of the district, the official notice actually lay unopened for four out of the six months. There can be little doubt that a systematic search would reveal not a few such undesirable burial places, and we must thank the Church of England Burial Reform Society for persistently having, for years past, drawn attention to this danger to health. In these cases we think the Home Office would do well to cremate the whole of the remains, or if their powers do not extend so far, to apply to Parliament for the necessary authority.—*Medical Press.*

**ST. LAWRENCE, READING.**—The records of the church, beginning from the first decade of the fifteenth century, rank amongst the oldest and most interesting in England. The first church was pulled down to make way for the Benedictine Abbey founded by Henry I. It was rebuilt, just beyond the precincts, in or about 1196, by Abbot Hugh, who assigned it to the newly-founded hospital of St. John the Baptist. Hugh's work comprises the arcade between the church and the north chapel (St. John's), the south door, and the east gable with its triple lancets; some fragments of walling, capitals, and so on, were found during a restoration of the tower about twenty years ago. The great west tower and the north arcade were erected in 1458-9; sixty years later new windows were inserted in the chancel and elsewhere, and the arches of the arcade were stilted by raising the columns. In the course of subsequent alterations, some of them carried out by Billing, were destroyed, the south transept, built in 1637, by Sir Francis Knollys, "for the peculiar use of himself and his posterity, as well for their seats there as for their burial place underneath," together with a cloister (see the aqua-tint in C. Conte's book, 1802) therefrom to the tower, built in 1619, with the bequest of John Blagrave, the mathematician, whose quaint monument (1611), however, is preserved. Other interesting features were wantonly obliterated, amongst them being the chancel aumbries, sedilia, and piscina, the roof-loft stairs, and some beautifully-executed paintings of the Transfiguration (1628) and the Annunciation, discovered above the lancet window and behind the wooden reredos respectively. During the repairs of 1867-8 the panelled and painted ceiling of the nave's east bay, and the dormer windows were removed. In the octagonal panelled font, carved in 1522 by Cheyney, the mason, who came from Wolsey's works at Hampton Court for the purpose, was baptised Archbishop Laud, who was born in a house that stood on the north side of Broad-street—where is now Lawd-place. The church books contain many

entries relating to the "Lawd" family, the sale of the altars in 1549, the relics and the clock, in respect of whereof 4d. was paid in 1493 for the "setting of Jak, with the hangynz of his bell and mending his hond," and the various customs and pastimes of old-world parochial life.—*Builder.*

**BATH ABBEY CHURCH.**—The following letter from the Secretaries of the Society for the Protection of Ancient Buildings, London, appears in the *Bath Journal*:—"The Society for the Protection of Ancient Buildings is glad to find from the appeal issued by Canon Quirk, the Rector of Bath, that 'repair rather than restoration' is to be the character of the proposed work at the Abbey Church. Nothing could be wiser than the advice given by the Canon 'to preserve and retain, and to make safe structural defects'; but my society ventures to suggest that before submitting the question of 'figures, sculpture, and statues' to an expert, it would be desirable to decide definitely upon what principle these are to be treated—and upon this subject, it is submitted, the parishioners are quite as well able to form a sound opinion as the most eminent and experienced ecclesiastical architect. Now, the ornamental features of the mediæval buildings are always interesting, because they reflect so faithfully and graphically the thoughts and feelings, not only of the age or even of the master builder who evolved the 'high embowed roof' and 'massy pillars,' but also of the individual craftsmen who carried out, and to a great extent planned, each detail; but in the case of Bath Abbey (if the legend of Bishop Olive King's dream can be relied on) we are not left to judge merely from the work what manner of men these workmen were, but we have the very thoughts and feelings which prompted their labours laid bare before us; and thus a fresh interest is added to their handicraft, as we see how it was made to express the emotions passing through the worker's mind. When, with such thoughts as these upon us, we gaze upon the ascending and descending figures (mutilated though they be) on the ladder of the Bishop's dream, we realise what a vast gulf separates mediæval architecture from that of the present day, and how utterly impossible it is to 'restore' such figures as these with any measure of success; and this not only because we cannot from the same cause be made to feel as our forefathers did (what was to them a heavenly vision, not to be disobeyed without sin, being simply a troubled dream to us), but also because the identical feelings, even could we possess them in all their fulness, would not now find the same mode of utterance, the expression of the emotions in stone (which came so naturally to the carvers of the capitals in Wel's Cathedral) being as foreign to present ideas as is the ransacking of the Bible in search of those plays upon words and names which seemed to our ancestors replete with such deep meaning, and to mix so well with even the most sacred subjects. Consequently such restoration must, from the very nature of things, always prove a failure, for it is the attempt to express feelings in which we very imperfectly participate, by language we should not naturally employ. For these reasons my society most earnestly hopes that some definite and authoritative assurance may be given that the statues upon the west front of Bath Abbey Church shall be in no way tampered with, and that no attempt shall be made to give to the sculpture the appearance it possessed in the 16th century, or at any other period of its history.

## TENDERS.

For the taking down and rebuilding of about 334 ft. of the steamboat quay at Limerick. Mr. H. V. Moroney, B.E., engineer:—

G. Lawson, Glasgow	£13,100	0	0
J. Cunningham, Dublin	8,938	0	0
M. Gough, Limerick	5,904	6	2
P. Dillon, Limerick	5,046	0	0

For the supply and erection of a locomotive steam crane to raise 3 tons at a radius of 45 ft., for the Belfast Harbour Commissioners:—

Chaplin and Co., Glasgow	£1,239	0	0
Booth and Bros., Leeds	1,125	0	0
Wilson and Co., Liverpool	1,009	0	0
Dimop, Bell, and Co.	955	0	0
M'Call and Co., Belfast			
(accepted)	900	0	0

For works and repairs to be executed at the Markets, Limerick:—

P. O'Neill, Limerick	-	-	£220	0	0
P. M. Bourke	"	-	129	0	0
M. Gough	"	(accepted)	117	9	0
P. Dillon	"	-	110	0	0

## THE IRISH BUILDER.

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## THE HISTORY OF ST. WOLSTAN'S.

[In our Eleventh Article on "Modern Dublin Fountains," which appeared in this Journal for 1st. Nov., 1898, and which treated of the *Meath Fountain* in St. Thomas Court, we promised to give in a future Article a "History of St. Wolstan's," which was granted by King Henry VIII. to his Chancellor, Sir John Alen, in lieu of St. Thomas's Abbey, Dublin, which was granted to Sir William Brabazon, Knt. This promise we now fulfil with this and two more articles.]

**S**T. WOLSTAN'S is situated on the south side of the river Liffey, between Leixlip and Celbridge, in the barony of North Salt,\* and County of Kildare.

In the year 1202, a Priory was founded on the south side of the river Liffey, about two miles south-west of Leixlip, by Adam De Hereford, an Englishman who came over to Ireland with Richard, Earl De Striguel, surnamed Strongbow, in honour of St. Wolstan, Bishop of Worcester (then lately canonized by Pope Innocent III., 1198 1216) for Canons of the Order of St. Victor. Richard was its first Prior, to whom De Hereford granted the lands on the river Liffey, and the Church of Donaghcumper. Witnesses: John Comyn, Archbishop of Dublin; William, Bishop of Glendaloch; and Simon Rochfort, Bishop of Meath.

In 1271, William de Keredesham, or Kever-sham, Seneschal to Fulk de Sandford, Archbishop of Dublin, granted to this Priory the lands of Tristildelane, with the appurtenances thereunto belonging, in Frankalmoigne; he increased the number of the Canons, and obliged them to celebrate, duly, his and his wife's anniversaries; on which day they were to feed thirty poor men, or to give them in lieu thereof one penny each, under the penalty of 100 shillings, to be paid to the Archbishop, for the time being, upon every such failure, and 100 shillings to be expended on the Cathedral Church of St. Patrick.

1308. John le Decer, who was Mayor of Dublin this year, erected (at his own expense) a bridge near this priory over the river Liffey, now called New Bridge.

1380. The manor of Donaghcumper having been granted to this priory in 1310, and without licence, it was seized into the King's hands; but it was this year restored.

1390. Died Maurice, Earl of Kildare, a munificent benefactor to this house.

1536. Richard Weston was the last prior, and, on the Feast of St. Simon and St. Jude (1536), 28 Henry VIII., he was seized of the site of this priory, with four gardens, four parks, eight orchards, and six cottages, with their appurtenances, all situate within the said site, and adjoining the river Liffey; also of certain parcels of land, being the demesne of the priory, viz., in Watersfields sixty seven acres of land, fifty-two acres in Motehfields, thirty-seven acres at the west side of Donaghcumper; ten acres of meadow, twenty acres of pasture, twelve acres of wood and under-

wood, two water-mills, and the whole course of the river Liffey, parcel of the manor of Donaghcumper, with commonage of pasture for prior's own cattle, and for his tenants, also his farm, value £13 6s. 8d.; he was also seized of the manor of Donaghcumper, with a court leet and court baron, and view of frank pledge within the said manor; together with eight cottages, four messuages, and one hundred acres of land in the possession of sundry persons; some pieces of land towards Stacumney, opposite the Motehfields; one acre in Byrliesfield, with some pasture ground at the fort of the bridge of Kildrought; ten acres of pasture, four of wood and copse, and six of meadow at Donaghcumper, the said manor being valued at £3 6s. 8d. yearly, besides all reprises; one messuage, twenty-seven acres of arable, twenty of pasture, three of meadow, twenty of turhary, a mill, with its mill-race on the river Anna Liffey, in Parsoneston, near Newbridge, of the yearly value of £4; forty-six acres of land, twenty of wood, underwood, and brushwood, ten of pasture, and ten in Backbieston, &c., &c.

This Priory and all its possessions, with the Manor of Kildrought, were granted for ever, 1st December, 28 King Henry VIII. (1536), at the annual rent of two knight's fees, one for the Priory and the other for the Manor, to John Alen, or Alen, of Norfolk, Master of the Rolls, in the year 1533, and afterwards Lord Chancellor of Ireland; he was knighted in 1542. The grant is as follows:—

"Grant to John Alen, of Cowteshall, in the county of Norfolk, Gent., Clerk, and Master of the Rolls and Records of Chancery [Ireland], of the scite, circuit, and lands, of the late monastery, or Priory, of St. Wulstans, the manor of Donaghcumper, and all hereditaments and possessions whatsoever, spiritual and temporal, in Donaghcumper, St. Wulstans, lez Mochfeldes, and Waterfeldes, at St. Wulstans aforesaid; and in Parsoneston, Stacumney, Bachieston, alias Backweston, Lexlip, Grangegormon, Rewe, Priorston, Trysteldelan, alias Castledelan, Tipperston, Straffan, Irishton, Andres, Balmakele, Ballycorkeran, Tyrowe, Corbally, near Gryffanrath, Kildrought, Galheggiston, and Ceyleston, in the county of Kildare; Coldreyny, Backbieston, alias Backweston, and Lucan, in the county of Dublin. The advowsons and patronage of the churches or chapels of Donaghcumper, Stacumney, Killadoware, and Donaghmore; with all tythes, pensions, oblations, glebes, and other emoluments and profits belonging to the said churches, rectories, or chapels, in the county of Kildare. To hold for ever by the service of one knight's fee, as succage runs: Rent, £10." (Pat. and Close Rolls, 28 Henry VIII.)

John Alen came over to Ireland as private secretary to his cousin, John Alen, Archbishop of Dublin, in the year 1529. After the death of the Archbishop in 1534, his secretary, John Alen, was, through the influence of Cardinal Wolsey, appointed Clerk to the Privy Council, Dublin Castle, and having been bred to the law, he was appointed Master of the Rolls in 1533. On the death of John, Baron Trimleston, Lord Chancellor of Ireland, 25th July, 1538, Alen was chosen to be his successor, by the Lord Deputy and Council in the great Chamber within the Hospital of St. John of Kilmainham, on the 31st July following; and appointed by patent, dated 18th October same year. (See History of St. Thomas Court, under *Meath Fountain*, in IRISH BUILDER for 1st Nov., 1898.)

On the Dissolution of Monasteries in Ireland, a Royal Commission was directed to Lord Chancellor Alen, appointing him, together with Robert Cowley, Master of the Rolls, and Sir William Brabazon, Vice-Treasurer, to accept the surrender of the dissolved abbeys and religious houses, and to assign to the heads of such religious houses competent pensions to maintain them during their lives. It was on this occasion

that Alen, when writing to Thomas Cromwell, Lord Privy Seal, "asks for the farm of St. Thomas Court, as he has no house in Dublin." (See IRISH BUILDER for 1st Nov., 1898.)

After Lord Chancellor Alen getting possession of the dissolved Priory of St. Wolstan's, he took up his abode there, and named it "Alen's Court." In 1546, the year before the death of Henry VIII., he was removed from the Chancellorship; but in 1548 (2 Edward VI.), he was again appointed by patent, dated at Westminster, 22nd April, 2 Edward VI., "with same fees from Easter last, as Sir Richard Rede [his predecessor] had received." In his patent he is described as "Sir John Alen, of Alen's Court, near Newbridge, County of Kildare." In August, 1551, Lord Chancellor Alen resigned his high office, and proceeded to London, where he was received into the presence of King Edward, who, "having been well informed by him of the wisdom, learning, good experience, and grave behaviour of Sir Thomas Cusack," appointed him Lord Chancellor of Ireland, by Privy Seal, dated at Windsor, 5th August, 1551.

Sir John Alen died in 1554 (2 Queen Mary I.), at St. Wolstan's, and leaving no issue, he bequeathed St. Wolstan's, and all his other estates, to his cousin, Francis Alen, brother to the Most Rev. John Alen, Archbishop of Dublin. (See "Family of Alen," in our next.)

An Inquisition, 28th August, 30 Henry VIII., finds that John Alen, of St. Wolstan's, Esq., was seized of a messuage and garden with three Rhood of land in Galheggiston, which he held with other lands, tenements, rents and possessions, lately belonging to this priory, from our Lord the King, with service and ye yearly rent of £10; and he was also seized of a certain place planted with trees called 'Hoolie Sted,' or 'Hoolie place of Symondes-ton,'\* parcel of ye said priory.

And another Inquisition, dated "on ye morrow of All Saints, 4 Elizabeth (3 Nov. 1561), finds that Sir John Alen, of Alens-court, in ye county of Kildare, Knt., was, before his death, seized in fee of ye Priory of St. Wolstan's, with four gardens, four parks, six orchards, six cottages within its site, near ye river Liffey, and seven acres of arable land there, called Telatorans; fifty-two acres of land there in 'The Menchenfeldes,' and thirty-seven acres and half on the east side of the priory; in Donaghcumper, also, ten acres of wood and copse, with two mills and their courses on ye south of ye river Liffey near ye Priory, annual value besides reprises,† £13 6s. 8d.; ye Manor of Donaghcumper, with eight cottages, four messuages, and one hundred acres of arable, an acre of land in Birelayes-felde, ten acres of pasture, four of wood and underwood, and six of meadow in Donaghcumper; annual value besides reprises, 66s. 8d.; a messuage with twenty-seven acres of arable, twenty of pasture, ten of wood, three of meadow and a water mill in Parsonston, annual value, besides reprises, £4; forty-six acres of arable, twenty of wood and copse, or briars, and ten of meadow in Backbeggesbie, alias Backweston, and four cottages, three messuages, forty-seven acres of arable, ten acres of meadow, twenty of pasture, two of copse or briars in the Rewer, near Tristeldelan, or Castledelan; seventy of arable, forty of meadow, twenty of pasture, ten of copse or briars, at Ories-ton, in Tristeldelan, 6d. annual rent out of two acres of land in Inchecarten; and 20s. chief rent in Tipperston, annual value, besides reprises, £5; four cottages, three messuages, forty-one acres of arable, twenty of pasture, two of meadow, three of copse or briars in Balmakelly; fifty-five acres of arable, twenty of pasture, &c., with ye ancient town of Ballycorcoran; sixty acres of arable, ten of pasture with a common, two

\* North Salt: a name derived from the Latin appellation of the catfish on the river Liffey, called *Salus Salmontis*, now popularly known as the "Salmon Leap," in the vicinity of Leixlip, and about eight miles from Dublin.

\* Now Simmondstown, a townland in the Co. Kildare, containing 3 0a. 2r. 35p., in the barony of South Salt, and parish of Donaghcumper.

† Reprises: Deductions or payments out of the value of lands, such as rent-charges or annuities.

acres of meadow, four of copse, &c., in Tyrowe, annual value, besides reprises, 53s. 4d.; two cottages, two messuages, and sixty acres of arable, twenty of pasture, two of meadow, ten of wood, copse, &c., near Griffan-rath, in Corbally; a messuage, garden and croft in Galbegalston, now waste; a messuage, fourteen acres of land in Grange-gorman, a messuage with ye site of a mill on ye river Liffey, and ye sert of all ye tenants of Adresse to ye said mill; ten acres of land in Adresse; two messuages, thirty acres of land in Adresse; six acres of land Irishton; a messuage and an orchard adjoining in Stacumney, and twenty acres of land there; two acres of marsh or bog in Kildrought, annual value, £3 6s. 8d.; a messuage and eight acres of land in Kildrought, held from her Majesty by service, and ye annual rent of 2s. 2d.; three messuages, fifteen acres of lond, one of wood and copse in Leixlip; four messuages, nine acres and half of land there, and an orchard held also from ye Queen, at 3s. 4d. annually, worth, besides ye reprises 3s. 4d.; 6d. chief rent in Coylestown, four messuages, three cottages, six acres of arable, twenty of pasture, and fifty of common, four of meadow, and five of wood and copse in Simondeston; two messuages, fifty acres of land in Galbegeston; fifteen acres of arable, one of pasture, in Meyston; four messuages, 130 acres of arable, twenty of pasture, four of meadow, and three of copse in Laughlanston; thirty acres of land in Portcoston, a messuage, thirty acres of land arable, two of pasture, and a common; one acre and half of meadow and four acres of wood in Colefitches, value £10 17s. 8d.; a messuage three acres and half of land, one of wood in Simondeston; and a messuage and five acres and half of land in Galbegeston. All ye said land being in this county [of Kildare]."

From the Cromwellian Confiscation St. Wolstan's was saved at the Restoration by a "Decree of Innocence," which James Alen, "Irish Papist," of St. Wolstan's, had from the Court of Claims and Distributions, 1662-3. The Commissioners of the Court of Claims granted St. Wolstan's to Hugh, 3rd Viscount Montgomery, a gallant Royalist during the period of the civil wars of 1641, and, after the Restoration, he was, in 1661, created Earl of Mount Alexander: but James Alen ultimately succeeded in getting a "Decree of Innocence," and thereby saved his property. The Alens' case was as follows:—Hugh Montgomery, Earl of Mount Alexander of Ardes, in the County of Down, who had suffered much in the King's cause from the Commonwealth Government, got a clause inserted among the instructions to the Commissioners for executing the Act of Settlement, to deliver St. Wolstan's to him (Lord Mount Alexander), if it should be forfeited. But James Alen, of St. Wolstan's, nephew of Sir Thomas Alen, Bart., and Lady Alen, widow of the said Sir Thomas, obtained a "Decree of Innocence" even from these partial Commissioners. Lord Mount Alexander thereupon addressed the Duchess of Ormonde (11 January 1663), beseeching her to urge the King [Charles II.] to order a re-hearing of the claim, on the ground of some intercepted letters from Colonel Richard Talbot (afterwards Duke of Tyrconnell) to his brother and Sir Bryan O'Neill, proving fraud and corruption in the obtaining of that decree.

In, May, 1662, the Act of Settlement was passed, which virtually annulled the proceedings of these Commissioners, and the Earl of Mount Alexander was put into possession of St. Wolstan's by the Irish House of Lords by virtue of their privilege in favour of a fellow peer. But James Alen and Lady Alen, on the 28th February, 1663, obtained a decree of Innocence from the new Court of Claims, got their property restored, and caused a profound indignation and mortification to the land pirates who were hungry for Irish estates. The House of Commons—"the first Protestant Parliament that ever sat in this Kingdom"—now took fire from the Alen decision, and proceeded in a body, headed by their speaker, Sir Audley Mervyn, and pre-

sented an address, that would have made every Irishman incapable of restoration to their estates. They also reflected on the conduct of the Commissioners for annulling the grant to Lord Mount Alexander. The Duke of Ormonde then Lord Lieutenant of Ireland, giving Lord Clarendon an account of the discontents raised by this decree amongst the English (new and old), says that "they conclude themselves utterly lost in consequence of it. Such a judgment against such direct evidence, as they pretend was made against the Alens, could not have been given but upon some private directions from the king; and the false and scandalous suggestion gained the more credit because it was said that my Lord Berkeley and Colonel Richard Talbot had purchased Alen's interest in his estates, which was worth, they said, £1,500 a year."

That Alen had the aid of Lord Berkeley and Colonel Talbot is plain; Lord Berkeley acting, it would seem, out of pity (for he said that the poor Irish would be destroyed by the number and malice of those that sought their ruin, unless His Royal Highness the Duke of York undertook their protection), and Colonel Talbot, on a promise of part of the lands, for his soliciting Alen's cause.

Ormonde, writing on this subject, in answer to the Rt. Rev. Michael Boyle, Bishop of Cork (who had warned Ormonde of the discontents of the English of Cork), says very pointedly: "Who can believe that the Commissioners are partial, or that they design the destruction of the English interest, seeing that they are Englishmen and Protestants, men of good reputation for parts and integrity, without any relation to Ireland, and that the Act by which they judge was framed and passed without the advice or concurrence of one Irishman or Papist? Are they to judge all Irish Nocent? And none Innocent?" The truth was, he said, "when any person of credit among the Adventurers or Soldiers found himself to be pinched in his interest by a decree of the Court, he caused a cry to be raised that all was lost to the English, and the Irish would be their own masters, whilst some that favoured the cry" (he added) got "good bargains both of cattle and land of those who, frightened by their stratagem, were led to return to England." (See Carte's MSS., in Bodleian Library, edited by C. W. Russell, D.D., and J. P. Prendergast, Rolls Series, London, 1871.)

The following is a return of the lands and estate of St. Wolstan's, that were comprehended in the attempted confiscation:—

"Lady Alen, of St. Wolstan's, Protestant, and James Alen, of the same, Irish Papist:—

	A.	R.	P.
Collefitch, containing	38	0	8
Symonstown . . .	186	3	16
Donaghecumper . . .	79	3	34
Ballyknockane . . .	73	0	36
St. Wolstan's . . .	217	3	32
Laughlinstown . . .	193	3	33
Part of Donaghecumper . . .	8	0	0

Total, 797 3 39

"The estate of Lady Alen and James Alen in fee. By Decree of Innocence, 4th February, 1663."

James Alen was succeeded at St. Wolstan's by his eldest son, Patrick Alen, who raised a regiment, at his own expense, which he commanded fighting for James II. in the Jacobite and Williamite wars; but he being comprehended in the Articles of Limerick, his property was thereby preserved. He was succeeded at St. Wolstan's by his eldest son, Francis Alen, M.P. for the County of Kildare (1715-27), who conformed to the Established Church in 1709; and dying without issue male in 1751, St. Wolstan's ceased to be the residence of the Alens, owing to the state of the existing laws of that period, which prevented any of his stepbrothers who were Roman Catholics, becoming heirs to their brother's estate, he being a Protestant.

(To be continued.)

## THE STRUCTURE AND DESIGN OF EGYPTIAN TEMPLES.\*

A SHORT time ago we had the pleasure of listening to a very able and interesting address, by Mr. Scott, of Drogheda, on "Egypt as the Cradle of Architecture." In the discussion which followed, some very interesting questions were raised as to the origin and purpose of the Egyptian temples; and the answers to some of these questions it shall be my endeavour to supply to-night.

The slides which I have selected to illustrate the introductory portion of my lecture represent the elevation and ground plan of the Temple of Edfu, and the Inner Court of the same. You will observe over the gateway of the inner court the symbol usually known as the "Winged Sun Disc" prominently displayed. I have selected this temple as a starting point in tracing the history of Egyptian mythology, for the reason that the legend of the winged sun's disc is one which gives a very important clue to a right understanding of many of the more striking features of the Egyptian cults. I here shew an illustration of the disc itself in its most usual form, and another of the scarabæus as the winged Kheper, Ra—Ra being the title of the Egyptian sun-god, while the word kheper is still preserved in our word cock-chaffer.

According to the legend of the winged sun-disc, at a very remote prehistoric period, the sun-god Ra reigned and ruled in the land of Egypt, being assisted in the government by his son Horus, better known as Ra Harmachis or Horus of the two horizons, and called by the Greeks Aroueris, to distinguish him from the other Horus, the son of Isis. The enemies of Ra, in the form of crocodiles and hippopotami, rose against their sovereign, who determined to punish them. For this purpose Horus assembled his followers, the Hor-Seshu, who were armed with iron spears and chains. The Hor-Seshu, headed by their leader, who manifested himself in the form of a brilliant winged disc, embarked in boats at Edfu, and pursued the enemy down the river as far as Memphis. Having, as they thought, utterly destroyed all their foes, they returned, but to their amazement found that they had reassumed life and activity, and the battle had to be fought over again. Horus and his followers, who were sometimes called the "blacksmiths of Horus," were completely victorious, and Set or Typhon, the leader of the rebels was taken prisoner. He was brought before Ra, by whose command he was delivered to the goddess Isis and her son Horus, with orders for his destruction. His head was struck off, and he was supposed to be finally destroyed; but in some mysterious manner he returned to life, and reappeared in dragon or serpent form, being occasionally found lurking in fens and caverns. There is in addition to this legend a curious story of Set, who having assumed the form of a black pig, gouged out and swallowed one of the eyes of Horus. Ra, however, compelled him to disgorge it, and restore it to its lawful owner.

This latter is obviously an astronomic allusion to a solar or lunar eclipse, Set being the personification of the powers of darkness, as Horus is of those of light; and the re-appearing of Set or Typhon after his many defeats, and even death, is symbolic of the eternal conflict between light and darkness, as it appealed to the early Egyptian mind.

Looking at the ground plan of the Temple of Edfu—which may be taken as a typical Egyptian ecclesiastical structure,—you will perceive that it may be divided into three parts: an outer court, a middle court or cella, and an adytum or inner court, also called the naos or Holy of Holies. The adytum is surrounded by smaller chambers, which were used for keeping the sacred boat or baris, and the banners and insignia used in processions. The adytum was usually surmounted by upper chambers, which seem to have been devoted to astronomic purposes.

\* By Mr. M. Glover. Read before the Architectural Association of Ireland, on the 7th ult.

You will also perceive that the temple contains an open axis, and is so built that light can enter from one end only—that facing the naos, which always contained the statue of the particular deity to whom the temple was dedicated.

Seeing that the Egyptian cults were almost altogether astronomic, their gods and goddesses being supposed incarnate in the sun, moon, or fixed stars, we are not surprised to find that every Egyptian temple is oriented either to the sun solstitially or equinoctially, or to some particular star at the time of its heliacal rising.

This Temple of Edfu is interesting as being one of a series oriented to southern stars. The latitude of Edfu is about 25° N. The original temple is supposed to have been oriented to Canopus, the amplitude of which, 3900 B.C., was 86½° S. of W., which corresponds exactly with that of the temple. Canopus would here represent Horus, the rising sun, and this is corroborated by the fact that in the N.W. corner of the naos was found a magnificent monolith of gray granite, being the shrine of the sacred hawk of Ra-Hor-machu, to whom this temple was dedicated. In continuation of the legend of the winged sun disc, we may mention that Ra ordained that every temple throughout the land of Egypt, as well as that of Edfu should bear this sacred emblem.

Our next slide represents the laying of the foundation-stone of an Egyptian temple. Here we see the king holding in his left hand a stake, while in his right hand he grasps a golden club or mallet, with which to drive it into the ground. Facing the monarch is the goddess Sesheta, who is similarly engaged, while a cord serves to connect the two stakes. This ceremony is described on the monuments as the "stretching of the cord." We have an example of this in the case of the Temple of Denderah, dedicated to the goddess Hathor—the Egyptian Venus—where the Emperor Augustus is referred to in the following terms:—"The living God (the King), the magnificent son of Asti (Photh), nourished by the sublime goddess in the temple. The sovereign of the country stretches the rope in joy, with his glance directed towards the Ak of the Bull's Thigh (Ursa major) he establishes the temple house of his mistress as took there before."

The ceremony here referred to was not that of the original building of the temple, but that of its last rebuilding. It had been previously rebuilt by Thothmes III. (18th Dynasty), a stone record found in the temple stating that King Tehuti-kmes III. "has caused this building to be erected in honour of his mother the goddess of Hathor, Lady of An (Denderah), Eye of the Sun, Heavenly Queen of the Gods. The ground plan was found in the city of An, in archaic drawing on a leather roll of the time of the Hor-Seshu. It was found in the interior of a brick wall on the south side of the temple in the reign of King Pepi." This King (Pepi) had himself rebuilt the temple 3500 B.C. He belonged to the 6th Dynasty, and this throws back the original foundation to somewhere between seven and eight thousand years ago.

Another inscription in the same temple, referring to one of the restorations, says:—"Looking at the sky at the course of the rising stars, and recognising the Ak of the Bull's Thigh, I established the corners of the temple of Her Majesty." It is worthy of notice that here as in every other allusion to the courses of the stars, reference is made to their rising and not their setting.

We will now pass in rapid review the ground plans of several other Egyptian temples. Let us take that of the two temples at Medinet-Habu. In this we have a notable example of the change of the alignment of the axis of the temple to suit the apparent change of the position of a star due to the precession of the Equinoxes. The first temple was oriented to Phact (a Columbae), a conspicuous southern star, and, through lapse of time, had become perfectly useless for its original purpose; so that when Rameses III. (1250 B.C.) undertook its resto-

ration, he abandoned the old temple altogether, and erected a new one beside it, removing a portion of the walls of the older structure, and aligning the axis of the new building so that it would be oriented to the same star (Phact), thus proving that the "cult always follows the star."

We have another instance of this in the splendid temple of the sun at Luxor, now known as the "Temple of the Bent Axis." As so great an interval did not elapse, in this instance, between the original building and restoration, the architect simply extended the sacred edifice, building an addition "end on," but with the axis slightly deflected. The original temple dates 2425 B.C.; the more modern portion—that of Amenhotep III.—belongs to the 18th Dynasty.

The solar temple of Amen-Ra at Karnak also affords confirmation of the views already expressed. The original shrine of Usertasen I. of the 12th Dynasty having become useless, Thothmes III. (18th Dynasty) built an addition to suit the changed position of the sun to which it was oriented solstitially; and Rameses III. (20th Dynasty), in introducing a new cult, built a temple at right angles to the original.

Sir Gardner Wilkinson and others of the older school of Egyptologists not understanding the astronomic purpose of the Egyptian temple, could assign no reason for the apparent irregularity and eccentricity of their design but that of a certain mental perversity which they satisfactorily accounted for (to themselves) by designating it Egyptian symmetrophobia.

Another interesting ground plan is that of the Temple of Seti at Abydos, with an amplitude of 71½° N. of E., and oriented to the Ak of the Bull's Thigh. The temple of Abydos has a peculiar interest, in that it contains the famous "Tablets of the Kings." It was improved by Seti I., 1850, B.C., and rebuilt by Menepthah (19th dynasty), to whom we are indebted for the preservation of an Egyptian chronology from Mena, the first historical King of Egypt, to Menepthah himself. In our notice of Egyptian temples we cannot pass over unnoticed the remarkable rock-temple of Ipsambul, or Abu-Simbul, the present Istanbul, with an amplitude of 54° S. of E., and dedicated to the goddess Hathor. Its orientation, 3200 B.C., would have been to Phact (a Columbae), the star which in the Egyptian southern star cult immediately preceded Canopus.

The colossal monolithic statues over 60 ft. in height will ever remain monuments of the marvellous skill and artistic taste of the nineteenth dynasty. Among the ruins of the Temples of Karnak, the avenues of Crio-Sphinxes (Ram-headed Sphinxes) testify to the distinct change of cult which took place in the time of the Ptolemies. I allude to the substitution of the Ram-worship for that of the Bull-worship of a preceding zodiacal period.

Ka-Kau (second dynasty) founded the worship of the Bull Hapi (Greek—Apis), his own name meaning "Bull of Bulls." This afterwards became a favourite title of the Egyptian monarchs, being sometimes varied to Ka-maut-f (Bull of his mother). The universality and long continuance of Bull-worship, is a striking feature and one highly characteristic of all Eastern mythologies. We find numerous and continual allusion to it in both Egyptian and Assyrian records all through the period in which the sun at the time of the vernal equinox was in the sign of Taurus. Evidence of the change is to be found in the "great Mendes stele," erected by order of Ptolemy Philadelphos, in which it is recorded that the king deified a ram, placed it on his own throne, and paid it divine honours, further ordaining that every temple in Egypt should contain an image of the Divine or Holy Ram, which was henceforth to be worshipped throughout the land. It is remarkable that the time in which this event occurred was only a few years distant from that in which the astronomer Hipparchus observed that the sun at the time of the vernal equinox was situated in the first point

of Aries. Among the ancient monuments of Egypt, the statues of the Gods and Goddesses are well worthy of our attention. Foremost amongst these I would place that of the Goddess Ta-Urt (Gr.—Thoueris). She is represented under the composite form of a hippopotamus-headed beast in a pregnant condition, with pendulous breasts, and the hinder extremities of a dog. The arms are sometimes human, and the hands generally rest upon the mystic symbol of the "Buckle of the girdle." She represents the great mother Goddess of the Universe.

To understand fully all that is implied in the statue of this goddess would require a lecture to itself. Suffice it to say that at a time preceding the historic by at least seven or eight thousand years, her visible manifestation was the constellation of Ursa Major, which was not then circumpolar as now, but rose and set, and was altogether invisible for a certain portion of the year.

At the time referred to, about 14,000 years ago, Vega (a Lyrae) was Pole star. As a star of the first magnitude, remaining apparently fixed in the heavens, it strikingly appealed to the early Egyptian religious mind, and received the very appropriate designation of the "Heart of God," the deity which was supposed to be incarnate in the entire starry heavens, being known to them as the "God of the Motionless Heart," Ta-urt, "the great one," being his faithful consort, and indifferently styled the mother, wife, and nurse of God.

As time wore by, the apparently unchangeable heavens showed themselves as mutable as all earthly things, and when this great constellation no longer appeared in its wonted place, but gradually exalted itself in the heavens and seemingly rebelled against God, of necessity there was forced upon the astronomer-priests of the country the difficult but imperative task of accounting for the change, while still retaining their power over the people as the representatives of an unchanging deity. They extricated themselves from the difficult position in which they were placed by falling back upon their great astronomical knowledge, instituting the arrangement of the stars now known to us as the Zodiac, introducing therewith sun-worship, instead of the previously existing star cults, and in connection therewith formulating the Osiric legend.

It is hardly necessary to enter into a full explanation of this myth. It will be sufficient for our purpose merely to state that Osiris (Auser in the Egyptian) was fabled to have been a king of Egypt, Isis being his wife and Horus their son. Moved with a desire to extend the blessings of civilisation, Osiris, accompanied by a company, not of warriors and swordsmen, but of artificers, musicians, singers, &c., proceeded on his expedition of benevolence, leaving Egypt in charge of his wife, his brother being appointed co-regent.

Isis ruled the country so well and wisely that there was no occasion for Typhon's interference, and he was in despair of obtaining the object of his ambition—the government of the country. Hearing of his brother's impending return, he devised the following wicked scheme:—Assisted by 72 co-conspirators, he constructed a chest or coffin richly adorned with jewels, and of a size to suit exactly the figure of Osiris. They met his brother, and invited him to a banquet, and Typhon playfully promised the chest to whomsoever it would be found to fit. Several tried, but none suited. At length Osiris prevailed on to enter the coffin. Instantly Typhon shut the lid, poured lead upon it, and the assembly being broken up in confusion, he and his fellow-conspirators carried the chest to the Nile. The river bore the ark along, finally lodging it in the branches of a tree near the marshes of Byblos. The tree rapidly grew up, and enclosed the coffin. The king of that country had the tree cut down and used as a post in his palace. Meanwhile Isis, having heard of the death of her husband, set out, accompanied by her sister Nephthys, and her son Horus, in quest of his body.

The lamentations of Isis and Nephthys form the subject-matter of some of the most popular Egyptian religious hymns. On her quest Isis made the discovery that Nephthys had a son by Osiris (Anpu, Gr.—Anubis, symbolised by the jackal), whom they took with them on their journey. Arriving at Byblos, Isis, by her supernatural knowledge, immediately became aware of the presence in the pillar of her husband's coffin. She begged the pillar from the king, who at once granted her request. She had the pillar cut open, the coffin removed therefrom and deposited in a place of security until she could conveniently have it brought to Egypt in proper state.

Unfortunately Typhon, hunting in the moonlight, discovered the coffin, broke it open, took his brother's body, dismembered it, and distributed it in forty-two pieces in different parts of the country. Isis once more renewed her search, piously collected the scattered fragments, all of which she recovered except the virile member which Typhon had thrown into the Nile, where it was devoured by an Oxyrhynchus, which fish was ever afterwards held in the greatest abhorrence by the Egyptians. Several engagements occurred between Horus and Typhon and their respective followers, the outcome of which was that Typhon was defeated and captured, and though Isis released him from his captivity (which act so enraged Horus, that he cut off her head), yet the power of Typhon was effectually broken and Horus reigned triumphant. The title of the "living Horus" was ever afterwards borne by each successive king of Egypt; and Thoth, the moon God, restored Isis to life and gave her a cow's head in lieu of her own.

To Osiris, who of course had gone to the regions of the dead, was assigned the function of God of the under-world and judge of the dead. He thus typified the sun of the past, as his son Horus symbolises the sun of to-day; and the festival of the death and resurrection of Osiris was celebrated like that of every other sun-God at the time of the vernal equinox. The introduction of the Osiric legend, the outlines of which we have just given, marks a new epoch in Egyptian mythology, viz., that of the change from the star-cult to the zodiacal sun-cult. A similar change seems to have taken place in Assyrian mythology, and this helps to prove what has been so strongly asserted by Jensen and other writers, that the priests of the respective countries always maintained intercommunication notwithstanding any rivalry which may have existed between their respective governments.

We will now ask your attention to the next slide, representing the so-called Zodiac of Denderah. Here you will distinctly observe the twelve signs of the Zodiac as they are known to us at the present time; but in addition you will notice the symbols of several other constellations mostly in the northern heavens, such as the Bull's Thigh (Ursa Major), the Jackal, the headless Horse (probably Pegasus), the sacred Eye (Pleiades), and several others. At the outer margin of the planisphere is a series of divine characters, which represent the thirty-six Decans or ten-day periods of the Egyptian year, plus the five Epagomenae or intercalary days. Much valuable time has been wasted in useless controversy over this monument, which is now in the museum at Paris, but it is at length admitted that while the date of the planisphere is somewhere about 700 B.C., it in reality is a representation of the Egyptian heavens as they appeared at the summer solstice about 3500 years ago. This planisphere was found by the French expedition under the first Napoleon, in the very singular position of being inserted in the ceiling of a small upper chamber in the Temple of Hathor, at Denderah, which would have been accessible to the priests alone, showing that its astronomic purpose was never intended for popular use.

Several other star-charts have been discovered in Egyptian Temples, and a very

notable one was found in the Temple of Seti I. (nineteenth Dynasty), which we here show. The monolith of Amenhotep III. (eighteenth Dynasty), on the plains of Thebes, has now been proved by Norman Lockyer, the eminent astronomer, to have been oriented to the winter solstitial sun.

We will here shew the plan and elevation of our own monument of Stonehenge, which was likewise oriented to the solstitial sun, but in this instance not at the winter but at the summer solstice. May we conjecture that the game of "high-gates," still played by children in the country, is but a survival of some of the many forms of Sun-worship, including planet dances, ceremonial processions in the direction of the sun's movement, &c. &c.

For a moment we will transport ourselves across the Atlantic, and view in the "Mounds of Ake," in Central America, another proof of the universality of Sun-worship.

In the Egyptian Temple of Dakke we have an instance of one of the first of the northern star cult temples, it having been founded 3500 B.C. Higher up the Nile at Philae are some very interesting ruins, which until recently were supposed to be principally Ptolemaic. They are mostly Osiric; nearly all their pylons are adorned with the sun's disc, the columns and walls are covered with hieroglyphs and pictorial representations of scenes in the life of this exceedingly popular Egyptian Deity.

More recent investigation has shown, in this as in many other instances, that the Ptolemaic temples are but restorations of former buildings dating back to the middle empire, and in few cases to a much earlier date. The worship of the god Ptah seems to have preceded that of Osiris, and in this district the two cults were ultimately merged into one, and Ptah-Osiris-Seker was a compound of both deities. Egypt was no exception to the universal rule of occasional outbreaks of heretical opinions, which here as elsewhere sometimes received royal support. Khennaten (18th Dynasty), is here shown with his family worshipping the sun's disc: this is not to be confused with the worship of the "Disc of the winged Sun," previously alluded to. The determined opposition of the priests of Amen-Ra however actually compelled the king to change his royal residence, and after his demise this novel form of sun-worship dropped into complete disuse, and was never revived.

We will now briefly advert to those stupendous structures—the Egyptian Pyramids—but first we will notice the mastabas, which seem to have been the progenitors of the pyramid. These which we show are the mastabas of Gizeh as restored. The Temple of Abydos, at the period of the middle Empire, shows clearly how the mastaba idea became evolved into the pyramidal. A typical pyramid would be the "step" pyramid of Sakkara, and another, the great pyramid of Kufu (Gr.—Cheops) of which I show an elevation and section, and also a section of the famous "inclined passage." I am not disposed to accept the usual theories which have been advanced as to the purpose of this passage, neither can I agree with Colonel Howard Vyse in assuming that the hollow spaces over the King's chamber were merely for the purpose of relieving the enormous weight of the superincumbent mass: for, if so, where was the necessity for having the ceilings of these chambers so highly polished, while the floor areas were of stone in the rough unhewn state in which it left the quarries.

With regard to the Sphinx we will merely observe that it must have preceded the pyramid period, inasmuch as it was seen by Kufu. It has been held that it represents Ra Harmachus, but possibly it may have been the symbol of Hn, a pre-historic Egyptian god, generally represented as a man-headed lion.

The next represents an ornamented teak panel found on the walls of the Tomb of Hosi, a priest of the 4th Dynasty. The

carving and colouring are as perfect as when it first saw the light, and the three geese are represented in beautiful colours, perfectly true to nature, and as fresh as ever.

The beautiful diorite statue of Khaf-Ra (Gr. Chephren), on whose shoulders the symbolic hawk is represented with its wings overshadowing the head of the king, suggests a correspondence in this particular with the "Ravens of Odin." It was found in its present damaged condition in a well of an ancient temple near the Sphinx. The famous Sheik-El-Beled is next shown (5th Dynasty). The eye of this beautiful wooden statue is fixed in a bronze socket, the edges of which serve as eyelids. The socket is inlaid with white stones, and this with a darker stone to represent the iris, and a smaller black one to represent the pupil. It was found in one of the tombs at Sakkara.

The following piece of mural decoration shows the sculptors of the 5th Dynasty engaged at their work. The club-shaped mallets are worthy of notice, also the rolls of leather or cloth with which they polished up their work.

The "hark of gold" (12th Dynasty), which was found in an unripped tomb at Dashoor, near Gizeh, with several other articles of jewellery, is very interesting, as showing the skill of the Egyptian artisans of this period. The little figures are almost portraits in their individuality. The boat is 18 inches long, of pure gold, resting on a wooden body, and supported by bronze wheels. A few other statues of Egyptian kings of various dynasties, bear ample testimony to the artistic taste of these early sculptors.

The question has often been raised as to how the Egyptians moved such enormous masses of stone as they so often had to deal with. This slide shows the transport of one of their large statues. They seem first to have smoothed the way and made the route solid, and then, having fixed the monolith on a strongly constructed sledge, made use of levers and rollers, and having control of an unlimited amount of manual labour, found no difficulty in effecting their purpose.

The difference between Egyptian and European brickwork will at once be evident by a glance at our next slide. The following slide shews a single Egyptian brick which was considerably larger than ours, being usually twelve or fourteen inches square in section, and a few inches in thickness.

We next show a restored Egyptian fortress the ruins of which are to be found at Somneh.

The following is not a restoration, but an actual ground plan of buildings near the temple of the sun's disc. It is hardly correct to call it a ground plan—it is rather a combination of ground plan and elevation with a sublime contempt for perspective.

We will now pay a visit to an Egyptian country house. Here we see the lady of the mansion receiving her guests, attended by her domestics, one of whom is surreptitiously taking a draught from a jug of beer; and next, a plan and restoration of the house of Eye will give us a very correct idea of the arrangement of the various dining and sleeping apartments, with the kitchens and servants' rooms, gardens, ponds, &c., of an Egyptian gentleman's country house.

It may interest my friends who are architects to shew the proto-Doric columns of early Egypt, also the "bud and flower columns." The columns on either side of the priest of Ptah and his family shew both the capitals and bases of Egyptian columns of a very early period. I would invite your comparison of Assyrian columns, both separately and in their position in Assyrian palaces with the capitals and bases of the Egyptian columns here shewn. In connection with this subject, I would wish to bring under your notice this representation of the great Hall of Mitla, Central America, and also the columns at the castle of Chicken-Itza, and, again, the Toltec crosses of Tula. The Toltec crosses found among the ruins are of supreme interest, and the formation of the arches at Kabah and Comalcalco taken

in connection with the Governor's Palace at Uxmal, and the façade of the nunnery at Chickhen-Itza, will enable us to see how the human mind in different circumstances and in countries so very widely apart has designed such similar structures. The stone of sacrifice, with its collar of execution, are not pleasant subjects to dwell upon, neither is the sacrifice at Lorillard to Khu-Khul-Khan.

We shall terminate the lecture with a pleasant illustration—one shewing some Egyptian ladies at a feast. It is evident that the ladies were not disciples of Father Mathew, and that in matters of costume the cult of Mrs. Grundy was quite unknown in early Egypt.

So many points of interest have, I fear, escaped attention, owing to the necessarily limited time at our disposal, that I may not have fully explained many matters which I would have wished to deal with at greater length. I can only thank you for your extreme courtesy and patience in listening to my rather disjointed remarks on what is to me a subject of the very deepest interest.

### THE WORKMEN'S COMPENSATION ACT, 1897.

DEFINING and interpreting the meaning and intentions of the provisions of the Workmen's Compensation Act, 1897, is, as is usual with most Parliamentary measures of the kind, left for men learned in the law to undertake. The notion that the provisions of the Act of Parliament should be so clearly made out by these responsible for its authorship that they could never lead to litigation is, of course, quite utopian. But the Workmen's Compensation Act seems likely to prove a more than usually contentious measure, we should say, judging from the number of appeal cases which have come before the Lords Justices of Appeal. And when the appeal goes against the claimant for compensation it makes what is possibly a hard case doubly hard. It is curious to note how subtly the Justices of Appeal discriminate between what is left out of a clause and what is intended by that which it contained. Hence the result is generally quite uncertain until the judgment is given, and then, of course, everything is made as plain as daylight to the lay understanding! In a case brought before Lords Justices Smith, Collins and Romer, in the Court of Appeal, on Saturday, we have a capital illustration of the legal difficulties in the way of interpreting the clauses of the Workmen's Compensation Act. A workman had been killed whilst engaged in helping to put in some iron stays into a new building to strengthen it. He fell off a plank placed on trestles. The widow claimed compensation, and a county court judge had awarded her some £250 by way of compensation. This finding was appealed against, with the result that the appeal was allowed. The ground upon which the appeal was allowed was defined by Lord Justice Smith to be that this was not a case of employment on a building which was being constructed or repaired. "Here," said his lordship, "the building was already completed, and was in actual use. After it was completed something which was not in the original design was found to be necessary in order to strengthen it. Thereupon ironmasters were called in to put in girders for this purpose. Could it be said that the ironmasters were constructing the building? No, it had been already constructed. In his opinion, it was impossible to say that this was employment by the ironmasters on a building which was being constructed. In the case of an engineering work 'undertakers' were defined to be the persons undertaking the construction, alteration, or repair. But the Legislature, when they came to the case of a building, left out the word 'alteration.' Then was this a case of repairing a building? In his opinion it was not. Nothing was out of repair; the building was a new building, which wanted something additional in order

to strengthen the roof. Potting in that something additional was not repairing," with which subtle distinction the other Lords Justices concurred. Yet when one comes to look at the case and consider the circumstances one really hardly knows what to think of an Act which would make a distinction between the man who fell off a scaffold whilst repairing a building and the one who might fall in a precisely similar way when strengthening it. This is tweedledum and tweedledee with a vengeance. Still it is the law!—*British Architect*.

### ELECTRIC TRACTION.\*

THERE is no longer room for doubt that electricity is the one pre-eminently successful motive power for tramways. This is proved by the rapid growth of electric traction. The words "experimental line" have fallen out of use, yet it is only a few years ago that those who ventured to foretell that the trolley system would be generally introduced into this country were ridiculed. There is no country in which electric traction is advancing more rapidly, and in which finer plants are being installed than in Great Britain. The day is not far off when horses and steam will have disappeared from the streets as far as tramways are concerned, and when the horse 'bus as a competitor will be no longer known. The problem of greater importance, however, in which electric traction will be a principal factor, is the rapid transportation of large crowds from and to their business in our cities. The object of this paper is to investigate in a general way the special requirements of this service, and to demonstrate the special adaptability of electric traction to it.

It is evident that the only solution of rapid transit lies in railways which must be either overhead or underground, and of both London possesses a greater mileage than any other town in the world. The factor of initial expenditure must restrict the number of tracks available for the up and down traffic. The stopping places on such lines must of necessity not be far apart, and to diminish the crowds on the platforms and to increase the number of passengers, the trains must follow each other with the greatest possible frequency. Consequently the average speed of the trains must be increased as much as possible without unduly diminishing the distance between two consecutive trains, which would be dangerous.

There is a commercial limit as far as distance is concerned beyond which transmitting power electrically will not pay. But that limit varies with each case, and cannot be ascertained except by the most careful calculation after all the conditions that obtain have been minutely examined. England was the first country to introduce electric traction on railways, both underground and overhead, as instanced by the City and South London, and Liverpool overhead electric railways. But, to prove commercially that very much heavier traffic could be handled, that much greater distances could be traversed, and to develop on a large scale the necessary machinery, was again left to America, and hence the necessity of being practically confined to American experience and examples in this paper.

There are practically three methods of handling electrically the traffic on a railway, namely:—1. By locomotives or motive cars hauling a train of trailer cars. 2. By independent motor cars. 3. By a set of independent motor cars formed into a train and handled from the front car or from a so-called controller car. Each car, however, can be separated from the train, and it then becomes an independent motor car.

As regards the supply of the necessary current for the motors, there are three distinct methods:—Firstly. By accumulators

or storage batteries which may be carried either on the motor car or locomotive, or on a tender. Secondly. By having a car containing a stationary engine, dynamo, and boiler, which supplies the necessary current to the motors on the cars comprising the train of which it is part, and as proposed by W. Heilmann. Thirdly. By continuous or multiphase current supplied directly from a generating station or from a sub-station which, in its turn, gets its supply of energy from the main station, the current being distributed either in the form of direct or polyphase to conductors running along the lines, and from which the power is supplied, through sliding contacts on the cars to the motors. The system of transmission of energy to the motors by means of conductors laid along the track, will therefore alone be considered.

This method allows of several variations as far as the generation and distribution of power is concerned, amongst which the chief may be set down as follows:—

(a) One continuous current generating station supplying current direct to contact rail. Where drop in pressure owing to distance becomes excessive, a negative "hooster" may be used—it serves, so to speak, to pump back the current to the station, and is self regulating, not taking at any period more power than is actually required to pump the current back. Should there be one or two lines too long to enable them to be worked this way, polyphase high tension generators should supply the power to one or more sub-stations along the line, as may be found necessary, in which rotary converters are located, which transform the current back into continuous. The polyphase generators to be driven by continuous current motors in the generating station. As an example of such a station, the new Dublin tramway power house may be taken.

(b) One central station generating continuous current with sub-stations in which accumulators are located along the road, and which are charged by means of a booster and special cables. As an example of this system, the Leeds tramways may be taken as designed by, and carried out by, the late lamented Dr. John Hopkinson.

(c) A series of stations, as described under (a) and (b), situated at various distances and connected together one with the other.

(d) A power station generating polyphase currents, which, by means of static step-up transformers, are transmitted at tensions which run from 2,500 to 40,000 volts to sub-stations where static step down transformers reduce them to pressures of 300 to 350 volts, the current at this pressure enters rotary transformers, which deliver direct current at 500 to 550 volts to the line. As an example of this latter system, the Central London Railway, which is now under construction, may be mentioned.

(e) A three-wire system with continuous current, the rails or return forming the neutral wire. This has been tried and found wanting, and the engineers of the Central London Railway most carefully investigated its possibility and decided in favour of polyphase transmission and rotary converters, and rightly so.

From careful calculations and the investigation of what has been done, both in Europe and America, there is no getting behind the fact that for any power station which will exceed 4,000 kilowatts in capacity, the polyphase system is nearly certain to prove commercially the only admissible one. This statement is upheld by such an authority as Mr. H. F. Parshall, M.I.C.E. It is evident that in the particular cases at present under consideration (suburban and metropolitan communication), more than 4,000 kilowatts will be under consideration, and therefore nothing as far as the power station and transmission is concerned, but polyphase currents will be considered.

A short examination of the importance of rapid acceleration on lines having stopping places at short intervals is interesting. Practical experience with electrically-driven

\* Abstract of a Paper on "Electric Traction and its Application to Suburban and Metropolitan Railways," by Mr. Philip Dawson. Read at Society of Arts, London, on 22nd ult, and published in their Journal.

motor cars, or locomotives on the experimental track of the General Electric Company, at Schenectady, has proved that it is perfectly feasible to attain a speed of 30 miles an hour 10 seconds after starting from a standstill. Assuming a level track, and that during 65 seconds the current is cut off, and the train allowed to coast, that the brakes are then put on, the train will be brought to a standstill 15 seconds later, and the total time from start to stop will be 90 seconds. Under these conditions it will be found that the average speed will have been 23.16 miles an hour, and that the total distance run will be about .55 of a mile. Assuming that instead of attaining the 30 miles an hour in 10 seconds, it took 30 seconds, and that this full speed of 30 miles an hour was kept up for 40 seconds longer, and the brakes then put on, the train would be brought to a standstill in 90 seconds, and the average speed would work out as 21.66 miles an hour, or an average speed of about 10 per cent. less than in the previous case, the consumption of power, however, being much greater. It is evident that the most important point is to attain a high average speed, and to keep the maximum speed attained as low as possible, as by so doing less power is required in braking the train, and also less power is required to run the train. The time between the moment when the maximum speed is attained, and when the brakes are put on, should be at least from 4 to 6 times that required for stopping the train, so as to allow for errors in judgment on the part of the driver, and also to enable him to make up lost time.

A much larger current will be required to attain a rapid acceleration than to attain a slow one, but the current will be required during a much shorter time, and the total energy supplied will be less in the case of rapid than of slow acceleration. This fact must not be lost sight of when calculating the feeders for such a system, and the train service should be arranged in such a way that as few trains as possible start together. Furthermore, the more rapid the acceleration required, the larger will the motors have to be, and therefore there will be a limit, above which it will not be advantageous to push the rapidity of acceleration. In new tunnel lines, such as are now being constructed all over London, it will be evident that it is an advantage to have the stations built with a down-grade for the trains to start, so as to help the motors and reduce the current required at starting, and that similarly it will be an advantage to have an up-grade when nearing a station, so as to reduce the amount of power required in braking. By properly choosing these gradients it is found that a total economy of from 40 to 50 per cent. in the total power required by a train may be made.

In an experiment with a train composed of one motor car and one trailer car, weighing 57 tons, with an average distance between stations of 4,280 ft., a maximum speed of 37 miles was attained, the average speed being 17 miles an hour, the power required being 0.067 Board of Trade units per ton mile.

From a comparison of the actual results obtained on the elevated electric railways of Chicago and on the Metropolitan and District line in London, we see that whereas the maximum speed of 25 miles an hour is obtained in 10 seconds with electric traction, it takes 33 seconds to do it with steam locomotives—and that whilst the electrically propelled train could do the distance of 1,880 ft. in 66 seconds, with steam it would take 93 seconds, or nearly half as much time again. If in the case of electric traction the power is cut off the moment the maximum speed of 25 miles an hour is obtained, and the train allowed to coast before the brakes are put on, the distance considered would be done in 76 seconds. The steam driven train even then would take more than 25 per cent. more time to do the same distance.

Having tried to show the advantages which electric traction possesses as regards the possibility of increasing the frequency of the

trains without decreasing the factor of safety, namely, the distance between two trains, it may be advantageous to see how, from an economical stand-point of generating power, electricity is a cheaper method of operation than steam locomotion. An electrically driven train only requires one man instead of two to drive it, and when the train is not running no power is consumed and no coal or water wasted. Steam locomotives, it is well known, use but very little less coal and water when they are standing still than when they are running, and are much less economical, consuming as they do in America, from five to six pounds of coal per indicated horse-power. On main line English roads it is stated that three to four pounds are consumed, and taking an average power of 400 horse power per locomotive, and a train plus engine weighing 250 tons, at a speed of 40 miles an hour, we get at the most economical rate about 0.65 lbs. of coal per ton mile, or compared to the electric power required by electric traction 13 lbs. of coal per Board of Trade unit required, which is enormous—under favourable conditions it would not take much over 3 lbs. of coal to give one Board of Trade unit at the switchboard. A properly-designed electric station with large units would probably never consume more than 2 lbs. of coal per indicated horse-power hour, or 2.65 lbs. per kilowatt hour at the switchboard, and engines of the size of 4,000 to 6,000 horse-power would be guaranteed to consume not more than 12 lbs. of steam per indicated horse-power hour. A large station would fully justify a comparatively large initial expense in coal handling and stoking machinery, and the location of the station could be chosen so as to be most advantageously situated as regards both coal and water, the coal without being handled being taken from either ship's hold or the railway truck, conveyed automatically to the coal stores, and from thence automatically to the fires, the ashes being conveyed away automatically as well. In such a station but very few men would be required, and the cost of power could be reduced below one halfpenny per Board of Trade unit, including expenses of every kind.

The coal and water consumption, per Board of Trade unit, must necessarily be very low, the losses in the step-up and step-down transformers and in the transmission and rotary converters would not be very great, and it would be perfectly feasible to attain an efficiency of 60 per cent. at the motor terminals and of 50 per cent. on the power applied to the car axles. Large engines and large generators and converters are designed so as to take an overload of 25 per cent. for any period of time, and be capable of overloading 50 per cent. for a short time without injury, and by a selection of proper units a very large economy could be attained.

The elevated railroads of New York and Brooklyn have been losing business during the last few years so rapidly that the financial condition of the Brooklyn system is serious, and the return on investment of the New York system much reduced, and is still declining. The elevated railroads of Chicago have never been able to earn a satisfactory dividend. The general introduction of electricity in the Chicago system has greatly improved the Chicago situation, in spite of the competition of the surface trolley lines, which parallel the elevated lines in most cases. The elevated railroad problem is resolved into a discussion of speeds, station frequencies, and relative costs of service. Any railroad of this class which aims to maintain a high schedule must choose a motive power in which the possibilities of rapid acceleration are a maximum, and—all other conditions being equal—should choose that particular motive power which will bring about the quickest acceleration, consistent with due economy.

The Manhattan system is a comparatively simple one, with four main through lines, without branches of importance, while the Brooklyn and Chicago systems are composed of trunk lines with branches, involving more

or less complicated switching arrangements. Until about a year ago, the three Chicago companies—the Lake-street, the South Side, and the Metropolitan—had independent termini in the business heart of the city. Now, however, the newly-constructed "Loop," encircling the business district, is used as a terminus for all three lines and for a fourth, the North Western, now under construction, and all the elevated trains of the city pass round this loop on each trip. The Brooklyn elevated system has lately secured a new terminus on the Manhattan Island side of the Brooklyn Bridge, and experiments are being made with a view of converting the entire Brooklyn system to electricity in the near future. The entire New York system, however, is at present operated by steam locomotives. The little locomotives in use on the New York system weigh 47,000 lbs., of which 31,500 are on the four 42-in. driving wheels, and 15,500 are on the four 30-in. truck wheels. The total wheel base is 193 in., of which 60 in. is rigid. The cylinders are 12 in. in diameter, and have a 16-in. stroke. The grate area is 16.5 square feet, and the total heating surface is 4,034 square feet. There are 154 flues 1½ in. diameter and 75 in. long. The Standard Manhattan Car weighs 29,088 lbs., has seats for 48, and frequently carries 100 passengers. It is mounted on eight 30-in. wheels. The total weight of a 5-car loaded Manhattan train is about 130 tons. The weight on the drivers is 12 per cent. of the total train weight, and with 25 per cent. adhesion, the maximum drawbar pull possible for the locomotive to exert is 7,875 lbs. The electric locomotive car of the Metropolitan Elevated Railway Company, of Chicago, weighs 53,200 lbs., complete with motors, or 40,000 lbs. exclusive of motors. It is a standard American passenger car with full seating capacity, about one half of each platform being taken up with the cab and necessary controlling apparatus. The trail cars weigh 33,000 lbs. The seating and standing capacity of both motor and trail cars is approximately 90 passengers. The average 1-car heavily-loaded train will weigh about 100 tons, of which 32.5 tons approximately are on the four wheels of the locomotive's motor truck, and 67.5 tons are in the trail cars. From 30 to 35 per cent. of the entire train weight is available for traction under these conditions, and the maximum drawbar pull possible to exert without slipping of wheels is about 16,250 lbs. The South Side Elevated Railway Co. of Chicago is equipped with the Sprague multiple unit system, by means of which two or more cars in a train are equipped with motors and may be operated in unison by a single controller from any point in the train. The company is now operating four-car trains on each of which is a motor truck carrying two motors. The cars weigh about 20 tons each without loads, and about 60 per cent. of the train weight is available for traction.

There are therefore three distinct types of elevated railway equipment: the steam locomotive using 10 to 15 per cent. of the train weight for traction under heavy traffic conditions; the electric motive using 30 to 35 per cent.; and the multiple unit system using any amount desired up to 60 per cent. of the train weight.

To give an idea of what may be done as regards power transmission, the following few figures may be useful. The first attempts at this class of work were made during the Frankfurt Exhibition of 1891, 300 horse-power being satisfactorily transmitted a distance of 106 miles with a pressure of 30,000 volts. Since that time electrical power transmission has largely increased, and the results obtained have been very satisfactory, 4,000 horse-power at the present moment are regularly transmitted a distance of 85 miles to the City of Sacramento, California, at a pressure of 30,000 volts, where they are transformed into low pressure three-phase and continuous current for lighting, power, and traction purposes. At Telluride, Utah, 1,000 horse-power are transmitted 55 miles

at a pressure of 40,000 volts; 4,500 horse-power are transmitted a distance of 40 miles to Salt Lake City at a pressure of 15,000 volts; 1,400 horse-power are being transmitted 35 miles to Fresno, California, at a pressure of 11,000 volts; 2,000 horse-power are being transmitted 30 miles to West Kootenay, British Columbia, at a pressure of 20,000 volts; 10,000 horse-power are being transmitted from Niagara to Buffalo, a distance of 22 miles, at a pressure of 10,000 volts. All the plants are working and giving satisfaction, and have nothing experimental about them, and there are hundreds more such.

In the designing and carrying out of a large system, there are three points which are frequently overlooked, and which may cause a disastrous failure. These are: good and adequate bonding; thoroughly good insulation, both mechanically and electrically; and trucks suited for the work for which they are intended. As regards the bonding, the bonds used should be flexible, but, at the same time, should contain no solder or brazed joint, and they should be expanded against the side of holes drilled in the web or foot of the rail, and held in place by pins. Bonds of this description, when properly applied, can be absolutely relied upon, the contact resistance of the bond with the rail not being greater than the resistance of the solid bond. With regard to the third rail insulators, very good results are obtained by using insulating bolts screwed into base plates which are fixed to the sleepers, cast iron chairs being fixed to the head of the bolts to hold the rails.

ST. PAUL'S CATHEDRAL.—Mr. Balfour was questioned in the House of Commons on Friday evening last by Mr. Paulton, M.P., as to whether he was aware that, in the process of decorating St. Paul's Cathedral with Byzantine mosaics, black lettering, and stencilling in red paint, the original stonework has been cut away to make room for the mosaics; and whether, having regard to the importance of preserving intact the architectural and artistic features of this great national monument, he will use his influence to assist in having inquiry made into the subject of the injury alleged to be caused in these respects by carrying out the present scheme of decoration. Mr. Balfour replied by stating the fact that the "Government had no power of control or advice in the matter to which he referred in this question, but he added by way of an expression of personal opinion that he felt certain that the great artistic authorities who were concerned in the work of decorating St. Paul's Cathedral would feel, as everybody must feel, the great importance of preserving the historic structure unimpaired."

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HISTORY OF  
Dublin Hospitals & Infirmaries,  
FROM 1188 TILL THE PRESENT TIME.

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## THE IRISH BUILDER.

VOL. XLI.—No. 943.

## THE HISTORY OF ST. WOLSTAN'S.

(Continued from page 36.)

**A**FTER the death of Francis Alen without issue male, in 1751, St. Wolstan's was, by a decree of the Court of Exchequer, in 1752, sold, and purchased by Dr. Robert Clayton, the celebrated Arian Bishop of Clogher (1745-58), who expended a considerable amount of money in improvements, of which Mrs. Delany, in her letters, speaks very slightly. His lordship had for his neighbour, in Leixlip Castle, the Most Rev. George Stone, Archbishop of Armagh, and Primate of Ireland, whose notice of prosecution for heresy killed the Bishop of Clogher. Primate Stone maintained a lordly style at Leixlip Castle and in Henrietta-street, while Bishop Clayton, at St. Wolstan's and in St. Stephen's-green, kept up an equal grandeur. Mrs. Delany, in her Letters, says that "Bishop Clayton's house in St. Stephen's-green had a front like Devonshire House, and was *magnifique*"; and that "Mrs. Clayton's coach, with six flouncing Flanders mares, was not out-looked by any equipage except the Duke of Dorset's [Lord Lieutenant], for she would not be outshone by her neighbours, a thing not easily done here." The Bishop had large means, for, in addition to his episcopal income, he had inherited, in 1728, the family estates at Fulwood in Lancashire.

The Primate and his suffragan differed in politics as well as in doctrine, for the Bishop, as a consistent non-believer, persecuted the Catholics, and supported the infamous Priests' Registration Bill in the House of Lords, while Primate Stone, as an able and enlightened statesman, gave protection to the Catholics, and defeated the Bill. Charles O'Connor, of Belanagare, had a high opinion of Primate Stone's liberality. Writing to Dr. John Curry, author of the "Civil Wars in Ireland," he says:—"Had men of his temper been at the head of the Protestant cause for the last two hundred years, the Kingdom would not have been disgraced by religious persecution,—a man" (he says) "who wishes so well for the public, and confesses how it suffers by clapping bolts and manacles on two-thirds of the industrious and labouring classes of our people." And again, he says:—"In the Primate's sermon before the House of Lords in 1759, he expressed his sense of the difficulties the Catholics of Ireland laboured under, and gave them his encouragement, which before such an assembly should never be forgotten by the Irish. Never had we surely a better security from prejudice, religious or national."

Dr. Clayton, who had imbibed the Arian doctrines in opposition to the standards of the Church, published, in 1751, a work entitled an "Essay on the Spirit," the object of which was to prove the inferiority of the Son and the Holy Spirit, and to prepare the way for an alteration of the Liturgy of the Church of Ireland by having the Nicene and Athanasian Creeds omitted. To this work he prefixed a dedication, with his name, to the Primate, which had the effect of fixing on him the stain of heresy, and preventing his rising further in the Church. In 1752, he was recommended by the Duke of Dorset, then Viceroy of Ireland, to the vacant Archbishopric of Tuam, but was refused the promotion, simply from his being reputed the author of this essay. The zeal with which his lordship had entered into the Arian controversy, and his attempt to further the propagation of the same tenets in his legislative capacity, by a speech in the House of Lords, at Dublin, 2nd Feb., 1756, when he moved that the Nicene and Athanasian Creeds should for the future be omitted in

the Liturgy of the Church, made his lordship be viewed in a very unfavourable light by his brethren; that it was considered by the governors of the Church as highly improper that such conduct should be allowed in one whose situation required him to appear in her defence. Accordingly orders were sent by his Majesty George II. to the Duke of Bedford, then Lord Lieutenant, to take the proper steps towards a legal prosecution. A day was appointed for a general meeting of the Irish prelates at the Primate's house in Henrietta-street, Dublin; to which Bishop Clayton was summoned, that he might receive from them the notification of their intentions. A censure was certain; and it was apprehended he would be deprived of his bishopric. His lordship, however, and the other bishops and ministers who were to hold the Court, were relieved from all further trouble in so unpleasant an affair by the hand of death, 26th February, 1758. The disease was nervous fever, and the agitation of mind under which he was thrown when a prosecution commenced against him, proved the cause of his death. He died at his residence in St. Stephen's-green, on the 26th February, 1758, and was interred in Donnybrook church-yard on the first of March following. His wife, who survived him, was buried in the same grave with him, on the 8th January, 1766. Over their graves is a large tombstone bearing the following inscription:—

"Here lyeth ye body of Doctor Robert Clayton, Lord Bishop of Clogher, who was born in the year 1695, and was elected Fellow of Trinity College in 1714. He resigned his Fellowship in the year 1728; and the same year married Katherine, daughter of Lord Chief Justice Donnellan. He was promoted to the Bishoprick of Killala in the year 1729, and died in 1758, in the 64th year of his age. To enumerate all his amiable qualities would take up too much room for this place. His character as a Christian, and abilities as a writer, appear by his works. He lived esteemed by good men; he died regretted by many, and lamented by his affectionate widow."

Bishop Clayton, dying without issue, bequeathed his estate in Lancashire to his kinsman, Richard Clayton, Lord Chief Justice of the Common Pleas, Ireland (1764-69); but the principal part of his fortune, including St. Wolstan's, he bequeathed to his niece, the wife of the Rev. Thomas Barnard, eldest son of the Rt. Rev. William Barnard, D.D., Bishop of Derry (by his wife, Miss Stone, sister to Primate Stone). Thomas Barnard was born in 1726; educated at Westminster School, where he was admitted a King's Scholar in 1741. He afterwards became a member of Corpus Christi College, Oxford, where he took the degrees B.A. in 1756; M.A. in 1769; B.D. and D.D. in 1769. After his ordination he became successively Vicar of Maghera, in the Diocese of Derry, in 1751; Archdeacon of Derry in 1760; and Dean of Derry in 1769. He was advanced to the See of Killaloe by patent, dated 2nd of January, 1780, and was consecrated on the 20th February following, in the Castle Chapel, Dublin; and, 12th September, 1794, he was translated to the united Sees of Limerick, Ardfert, and Aghadoc.

Before the present Viceregal Lodge in the Phoenix Park was purchased for a summer residence for the Viceroys, it was the custom of the Lords Lieutenant to rent a suitable summer residence not too far from the Castle of Dublin. Hence we find that Lord Townsend, during his Viceroyalty (1767-72) had rented from the Right Hon. Thomas Conolly, Leixlip Castle, for his summer residence, where his wife died, 14th Sept., 1770; and of whom more hereafter. In 1780 the Duke of Portland, Lord Lieutenant, likewise rented St. Wolstan's from the Bishop of Killaloe. After his translation to the See of Limerick, Dr. Barnard let St. Wolstan's, in 1797, to Mr. John Coyne, an eminent schoolmaster, who kept a flourishing academy in 57 South Great George's-street, which he removed to St. Wolstan's, where

he continued it, with great success, till his death in 1812. Bishop Barnard died at Wimbledon, in Surrey, on 7th June, 1806, aged 80; and in 1816 his executors sold St. Wolstan's to Richard Cane, Esq., of 60 Dawson-street, ancestor of Captain Richard-Claude Cane, J.P., the present proprietor of St. Wolstan's. It may be interesting to note that it is to Mr. Richard Cane we owe the preservation of the ancient bridge that crosses the Liffey, near Celbridge, and which, although called *New Bridge*, is the oldest bridge now remaining on the beautiful Liffey, and with the exception of the ancient Bridge of Dublin which crossed the Liffey at Bridge-street, and which was taken down and rebuilt 1816 (since known as *Whitworth Bridge*), is probably the first of stone ever erected on it. From Pembridge's Annals, as published by Camden, we learn that this bridge was erected in the year 1308, by John le Dezer, Mayor of Dublin, at his own expense. It consists of four arches, some of which are semicircular, and others pointed or Gothic; and, like most ancient bridges, it is high and extremely narrow. Early in the present century this interesting monument of antiquity began to exhibit symptoms of decay, and its fate almost doomed by the County Grand Jury, from which it only escaped though the influence of the worthy proprietor of St. Wolstan's, Mr. Richard Cane, who declared that sooner than permit so interesting a monument of antiquity to be destroyed, he would build up a new bridge elsewhere, at his own expense. So that by a curious and not uninteresting coincidence, it owes its erection to one worthy and patriotic citizen of Dublin, and its preservation, after a lapse of more than five hundred years, to another. Mantled with luxuriant ivy, and enriched with the varied and mellow tints of so many centuries, it is in itself still an object of great picturesque beauty.

The present mansion of St. Wolstan's was built early in the seventeenth century, by one of the Alens (descended from a junior branch of the Alens of Norfolk, and ancestor of the Viscounts Alen, of Alen's Court, Dublin, and Stillorgan), who was famed for his skill in architecture, and planned the grand mansion at Jigginstown, near Naas, which was designed for the unscrupulous and unfortunate EARL OF STRAFFORD, Lord Lieutenant of Ireland (1639-43); but which was never finished.

The only remains of the ancient buildings still surviving at St. Wolstan's are a gateway, a square tower with a spiral stair-case, and another square building with a stone roof.

The old church of Donaghcumper has long since fallen into ruins, the remains of which are still to be seen from the road between Leixlip and Celbridge; the churchyard was the burial-place of the Alens as long as they were the proprietors of St. Wolstan's.

## LEIXLIP CASTLE.

Before proceeding further with the history of St. Wolstan's, we shall here give a brief sketch of Leixlip Castle, the residence of Primate Stone, and subsequently that of Lord Townshend, during his viceroyalty, 1767-1772.

The Castle is magnificently situated on the south-west of the town of Leixlip, and stands on a steep and richly-wooded bank of the Liffey overlooking the Salmon Leap. It was built about the close of the twelfth century, by Adam de Hereford, one of the chief followers of Strongbow, and founder of St. Wolstan's Priory. It is called "King John's Castle," from the event, it is said, of that Prince having made it his occasional residence during his governorship of Ireland in the reign of his father (King Henry II.). It is flanked on each side by two strong towers, that on the west side by a circular one, said to have been built by Prince John; and the other, on the east side, square, being added at a later period by one of the Geraldinos. But though this Castle is of great antiquity, it exhibits in its external character but little

appearance of an ancient fortress, having been modernised about sixty years ago, by the Hon. George Cavendish, its then occupier.

In the sixteenth century, Leixlip Castle was occupied by Sir Nicholas Whyte, Knt., Master of the Rolls in 1578; and continued in possession of his descendants till confiscated by the Cromwellians, by whom it was taken from its then proprietor, Sir Nicholas Whyte, of St. Catherine's, and given with sixty acres of land, to the Earl of Kildare. But, in 1663, it was again recovered by Sir Nicholas Whyte, "Irish Papist," by a Decree of Innocence granted by the Commissioners of the Court of Claims. The Castle of Leixlip subsequently passed into the possession of the Right Hon. William Conolly, M.P. for the Borough of Donegal, 1695-1700, and for the County Londonderry, 1703, till his death, *circa* 1736. He was also Speaker of the House of Commons, Ireland, in the reign of Queen Anne; sworn of the Privy Council; and about ten times filled the office of one of the Lords Justices of this Kingdom. He *m.* Catherine, *da.* of Henry Conyngham, Esq., of Mount Charles, County of Donegal, M.P. for Killybegs, 1692-1700 (and sister of Henry, first Lord Conyngham, so created 3rd Oct. 1753), by whom he acquired large estates in the County of Donegal; and dying *s. p. temp.* George II., was succeeded in his estates by his nephew,

Right Hon. WILLIAM CONOLLY, P.C., who *m.* Lady Anne Wentworth, eldest *da.* of Thomas, Earl of Strafford, K.G., Ambassador to the Court of Utrecht, son of William Wentworth, of Ashby Puerorum, in Lancashire, and grand nephew of Thomas Wentworth, the ill-fated Earl of Strafford, Lord Lieutenant of Ireland (1634-40). By this lady he had issue one son and four *daus.*\*

1. Thomas, his heir.

1. Anne, *m.* to George Byng, Esq., M.P. for Middlesex.

2. Harriet, *m.* the Right Hon. John Staples, M.P. for Bor. of Newtown Limavady, and was mother of LOUISA-AUGUSTA STAPLES, who *m.* the Hon. Sir Thomas Pakenham, G.C.B., and had, with other issue, a son and heir, EDWARD MICHAEL PAKENHAM, who succeeded to the estates of his grand-uncle, Right Hon. Thomas Conolly.

3. Frances, *m.* William, Viscount Howe, K.B.

4. Caroline, *m.* John, Earl of Buckinghamshire, then Lord Lieutenant of Ireland, and was mother of Emily, Marchioness of Londonderry.

The Rt. Hon. William Conolly built Castletown House, about two miles from his Castle at Leixlip. This noble edifice, erected in the Grecian style of architecture, is generally considered as one of the finest in the kingdom. It is built entirely of hewn granite, and contains a range of thirteen windows in each of the three storeys. A circular colonnade, supported by nine columns on each side, joins the house to the two wings, which are each two storeys high, and seven windows in breadth. The apartments are elegantly finished; the grand staircase is very magnificent, and ornamented with brass balustrades. The demesne and plantations about the house are extensive and beautiful; and the river Liffey winds through the lawn in many a fantastic form. Mr. Conolly leased Rathfarnham Castle and Demesne in 1742, to John Hoadley, Archbishop of Armagh. He was succeeded at Castletown by his son, Right Hon. Thomas Conolly, P.C., and M.P. for County of Londonderry; was one of the deputation appointed by the Irish Parliament to offer the Regency to the Prince of Wales (afterwards George IV.), on the first indisposition of King George III. He *m.* in January, 1758, Lady Louisa Augusta Lennox,

3rd *da.* of Charles, 2nd Duke of Richmond,\* (by his wife, Lady Sarah, elder *da.* and co-heir of William, 1st Earl of Cadogan, Marlborough's favourite Lieutenant), and sister to Lady Amelia-Mary Lennox, wife of James, 20th Earl of Kildare and first Duke of Leinster.

[Concerning this lovely Lady Louisa Conolly, who, before her marriage with Rt. Hon. Thomas Conolly, her father intended to be the wife of GARRET, 2nd Baron, and 1st EARL of MORNINGTON (father of the Duke of Wellington, and Mrs. Delany's godson). Mrs. Delany writes, in her charming Letters from Delville, Glasnevin, in 1758:—"I am amazed you did not know that Lord Mornington had made his addresses to Lady Louisa Lennox, young Lady Kildare's sister, a pretty girl about sixteen. He was well received and much encouraged by all the family, and no appearance of dislike in the young lady; but before an answer was positively given, Mr. Conolly, with double his fortune and perhaps half his merit, offered himself and was accepted." The answer to Lord Mornington was that "the young lady had an insurmountable dislike to him." Mrs. Delany delighted in her godson, Lord Mornington, and she did not at all approve of the Lennoxes for snubbing him in this fashion. She writes again in January the following year (1759):—"I went to the Play House [Crow-street] to see the *Mourning Bride*; the house was very handsome and well lighted, and there I saw Lady Kildare and her two blooming sisters, Lady Louisa Conolly and Lady Sarah Lennox [afterwards the mother of the Napiers], who I think is the prettiest of the two. Mornington was at the play, and looked as solemn as one would suppose the young lady he was engaged to would have done—they are to be married next Tuesday." Lord Mornington's young lady was Miss Anne Hill, *da.* of Arthur Hill, Esq., M.P. for County Down, created Viscount Dungannon, 27th April, 1765, and brother to Trevor Hill, Viscount Hillsborough, ancestor of the present Marquis of Downshire. It is curious, after this misadventure, to read in Napier's "Life," that one of the constant guests at the Castletown balls and receptions was ARTHUR WELLESLEY (afterwards DUKE OF WELLINGTON), "a shallow and saucy stripling," the son of Lady Louisa's rejected lover.]

The Right Hon. Thomas Conolly dying without issue 27th April, 1803, the life interest of his estates vested in his widow, at whose death, in 1821, they passed to his grand-nephew, Edward-Michael Pakenham, Esq., M.P. for Co. Donegal (grandson of his sister Harriet, wife of the Right Hon. John Staples. See above), who assumed the surname and arms of CONOLLY only. These estates consisted of the manors of Leixlip and Castletown, in the County Kildare; of Rathfarnham, in the County Dublin; of Ballyshannon and Parkhill, in the County Donegal, besides estates in Roscommon and King's County,—all purchased by the first Rt. Hon. William Conolly, Speaker of the House of Commons.

Primate Stone died, *unm.*, in London, on the 23th Dec., 1769, in the 57th year of his age, and was buried in Westminster Abbey. He left a brother, Andrew, a man of great learning, and a favourite at the Court of Frederick, Prince of Wales, father of George III.; and two sisters—one *m.* to Dr. William Barnard, Bishop of Derry, and mother of Dr. Thomas Barnard, of St. Wolstan's, Bishop of Killaloe (1780-94), and of Limerick and Ardferit (1794-1806); the other, Elizabeth,

who was killed by a break-down of her carriage, between Santry and Drumcondra, on the 4th of March, 1769. (For more of Primate Stone, see "History of Old Dublin Mansion Houses," under Henrietta-street, in IRISH BUILDER for 1st August, 1893).

The next tenant of notoriety the Right Hon. Thomas Conolly had in Leixlip Castle, was his Excellency, George, 4th Viscount (afterwards first Marquis) Townshend, Lord Lieutenant of Ireland, 1767-1772. Here his first wife, Lady Charlotte Compton (who brought into the Townshend family upwards of 250 quarterings, including the royal one of PLANTAGENET), died on the 5th September, 1770. Her Ladyship's death is thus announced in "Sleater's Public Gazetter" of Tuesday 4th to Saturday 8th September, 1770:—"On Wednesday the 5th inst., at three o'clock in the afternoon, died at Leixlip [Castle] the Right Hon. Charlotte, Lady Viscountess Townshend of Rainham, Baroness of Lynn Regis, Lady of his Excellency the Lord Lieutenant of this kingdom, and Baroness of Ferrers of Chartley in her own right. Her Ladyship was the daughter and sole heiress of James, Earl of Northampton, and Elizabeth Shirley, Baroness Ferrers, and is succeeded in title and honour by her eldest son, the Hon. George Townshend, now Baron Ferrers of Chartley."

Although Lord Townshend made himself very unpopular with the people of Ireland, especially among the citizens of Dublin, during the last two years of his administration, chiefly on account of his speech in the House of Lords for proroguing Parliament from 26th December, 1769, till the 26th of February, 1771, owing to the rejection of his "Money Bill" by the House of Commons, because it had not its origin in their House,—it being sent over by the English Privy Council. The excitement produced by this proceeding surpassed anything of the kind since the memorable affair of the famous "Wood's Halfpence," in the days of Swift. During this long parliamentary recess, witty and powerful invectives against Lord Townshend were published in the "Freeman's Journal," and were subsequently collected in a small volume, 12mo., entitled:—"Barataniana: or, a Select Collection of Fugitive Political Pieces, published during the Administration of Lord Townshend in Ireland." Yet, notwithstanding this unpopularity, he was a great favourite at Leixlip, where he gave great entertainments to the nobility and gentry; and also permitted the grounds about the castle to be thrown open to the public on Sundays, for the benefit of the citizens of Dublin who resorted to Lucan, with its celebrated Spa, and all the delightful epic scenery of the Liffey. It was, we believe, Lord Townshend who was the first Viceroy that made himself peculiarly eminent for the manufacture of knights, some of whom he dubbed could scarcely pay the fees of their creation; and thereby realised the farce of "The Devil to Pay," in many an humble family, by driving an honest industrious *Nell* from her domestic drudgery to figure as "My Lady," at routes, levees, &c. An instance of this occurred in the year 1770, when, on the 23rd August of that year, Lord Townshend knighted Anthony King, a brazier, of 22 Cook-street, who was one of the High Sheriffs of the city, for his eminent service in quelling a dangerous riot by a mob in Cook-street. In the course of a few days after, Sir John Hasler, then Gentleman-Usher at the Castle, sent the usual bill of accustomary fees, and a sword, which was also presented on the occasion to the newly-made knight. Sir Anthony was seated behind the counter, in a little tin-shop; his lady on the opposite side, selling a hard bargain of a save-all to an apple-woman, when the messenger with the bill and the sword arrived. The demand was £126. "One hundred and twenty-six devils!" said Sir Anthony. "Go home and tell your master that I am a knight, and that Isabella is a lady, without any fees; and that, as d'you see me, I shall never be Sheriff

\* McDougall, in his "Sketches of Irish Political Characters," 1798, says that the Right Hon. William Conolly had five daughters; one *m.* to Lord Ross, then Sir Ralph Gore; one to Mr. Byng, late M.P. for Middlesex; one to Sir William Howe; one to Colonel Staples; and one to the unfortunate George Robert Fitzgerald. (George Robert Fitzgerald was popularly known as "Fighting Fitzgerald.")

\* The Duke of Richmond had, with two sons, four beautiful daughters, namely:—(1) Georgiana-Carolina, *m.* to Henry Fox (afterwards Lord Holland). Her Ladyship was elevated to the Peerage, 6th May, 1762, as BARONESS HOLLAND, of Holland, Co. Lincoln, and was mother of the Right Hon. Charles James Fox, one of the most eminent statesmen of modern times; (2) Emily Mary, *m.* (1st) to James, 20th Earl of Kildare and 1st Duke of Leinster, and was mother of Lord Edward Fitzgerald; and, 2ndly, to William Ogilvie, Esq.; (3) Louisa Augusta, *m.* to Right Hon. THOMAS CONOLLY (but was near being the mother of the Duke of Wellington); (4) Sarah, *m.* (1st) to Sir Thomas Charles Bunbury, Bart., and (2ndly), 27th August, 1781, Hon. George Napier, and by him was mother of Sir Charles James Napier, G.C.B., the historian of the Peninsular Wars.

again—I won't want a sword; and harkee, let me see, by Jove, that ginger-bread thing you have there is not worth sixpence, and as I could make a better one out of tin, I won't have it; and I won't pay the bill, and so that's all, Mr. Messenger. I can't be posset [process] for the fees; and so, sir, if you please, I am Sir Anthony King, without fees." Isabella, her newly-made Ladyship, had cast a longing eye on the ribbon, which was tied in a fashionable knot to the sword; and turning to the knight, said:—"Sir Anthony, you may want the sword, you know, when you are Lord Mayor." "Poh! you fool," replied the knight, "there is a large gold sword belongs to the Lord Mayor, which is so heavy, that the city pays a man for carrying it: Besides, my dear, if ever I have a formal sword, it shall be a large couteau de chasse."

The bill was accordingly returned, and the fees have never since been paid.

However, Sir Anthony King was Lord Mayor of Dublin in 1778, when he had the honour of having "the large gold sword borne before him at the expense of the city."

Lord Townshend's successors in the Viceroyalty,—the DUKES OF PORTLAND, RUTLAND, and BEDFORD, have dubbed a greater number of those newly-coined dignitaries than all the other Viceroys since TOWNSHEND'S administration. Every copper-smith, man-milliner, broken apothecary, needy grocer, frizemonger, or other ambitious upstart who could only gormandise his way to the Sheriff's chair, and had the honour of entreating the Viceroy at his feast; or of procuring for his Excellency a Corporation address, or the Freedom of the City in a gold box, made himself sure of the honours of knighthood, speedily became Sir Somebody Something, lost his time all day walking about the streets and coffee-houses, to receive the greeting of his acquaintances by his new title; and never failed to visit the theatre at night with his "Rib," purely for the purpose of making a noise amongst the fashionables at his entree, and hearing the attendants screaming in the lobby: "Sir Timothy Tarpan's box, Sir James Trothy's, or Sir Drastic Jallap's box," and when the play was over, to hear the chairmen, and hackney-coachmen, out-roaring the lacqueys of fashion, with "Lady Tiffany's chair, or Lady Splitfigg's, or Lady Blanket's carriage."

Under the auspices of the Duke of Portland (1780), such numbers of the Medical tribe were dubbed *Sirs*, that the more modest part of the faculty became apprehensive that none of them were to escape the epidemical effects of this *Armiger-o-manni*. Amongst these latter was the facetious Surgeon Edwards, of Jervis-street, popularly called "Honest Tom Edwards," who had a patient at the opposite extremity of the city from his residence, his direct way to visit whom lay through the Castle-yard, which was the seat of government; and by any other way, he must have gone nearly a mile out of his course. This inconvenience, however, he preferred, and being met one morning by a brother Æsculapius on his way to his patient, by a route so circuitous, the other asked him why he had not gone by the direct way through the Castle-yard? "Why," answered Edwards, "have you not heard of the Duke of Portland's freaks, and do you want me to expose myself to the danger of Knighthood by passing through his very den?"

(To be continued.)

#### THE ROYAL IRISH ACADEMY.

A GENERAL meeting of the Academy was held on the 11th inst.

The Earl of Rosse (President) occupied the chair.

Mr. John Ribton Garstin, F.S.A., read a paper on "An Effigy of a 15 century Archbishop of Dublin." He said he proposed to describe a sepulchral brass of exceptional antiquity and artistic merit, which, though fully appreciated in England, deserved to be better known on this side of the Channel,

especially in Dublin, one of whose early prelates it commemorated. In order to show the interest and importance of this brass, it seemed necessary to take a brief review of kindred monuments in England, and then to notice the principal ones to be found in Ireland.

On the motion of Dr. O'Donovan, seconded by the Rev. Dr. McCreedy, a vote of thanks was passed to Mr. Garstin, and his paper was referred to Council for publication.

Professor Friedrich Blass, of Halle, Hon. M.R.I.A., read a short paper on "The Greek text of St. Mark's Gospel."

On the motion of the Provost of Trinity College (who expressed his appreciation of the paper), the communication was referred to Council for publication.

A letter was read from the University of Cambridge, drawing attention to the fact that in the autumn of the present year Sir George Gabriel Stokes would have held for fifty years the Lucasian Professorship of Mathematics in the University. The Senate had decided to celebrate this event on the 1st and 2nd June next, and invited the Academy to nominate two delegates to represent them on the occasion. On the motion of the Provost of Trinity College, seconded by Dr. O'Donovan, the President and Dr. G. F. Fitzgerald, F.T.C.D., were requested to represent the Academy.

A collection of Stone Objects found at Old Connaught, Bray, presented to the Academy's Museum by the late Most Rev. Lord Plunket, was exhibited, and was regarded with much interest.

#### THE ROYAL SOCIETY OF ANTIQUARIES OF IRELAND.

On the 29th ult. a meeting of above Society was held at 6 St. Stephen's-green.

Mr. THOMAS DREW, R.I.A., in the chair.

Mr. George Coffey contributed "A Communication on the Palaeolithic Period, with evidence of the Antiquity of Man." The Palaeolithic Age preceded the neolithic age at a distance of time which could only be estimated as a geological one. The remains of the palaeolithic age were found in the river drifts, or down under the stalagmite floors of caves, associated with which were the remains of the great cave bear, the hairy elephant, the mammoth, the woolly rhinoceros, and a number of species which were either wholly extinct in Europe now, or were locally extinct. Neolithic implements and remains, on the other hand, were found on the surface deposits, or at the surface, and were associated solely with the present fauna. That was the broadly-marked distinction between the two periods. The river drift period took place shortly after the great glacial epoch. In that early period the rivers appeared to be shallower but much wider. The period was one of great cold. In the gravel beds had been found a number of stone implements, rudely pointed, and the remains of extinct species of mammals and others. In the North of England had been found very extensive remains of that period. In Ireland up till the present no human remains of the river drift or palaeolithic period had yet been found, nor any of the distinct types of the instruments of that period. The palaeolithic age was dated geologically from the time of the recession of the glaciers from Europe down to the beginning of the modern order of things. There was, he might observe, every reason to believe that in that period the geography of Europe was very different from what it was now. An evidence of that was afforded by that great fishing-ground, the Dogger Bank, on which great quantities of bones of extinct species of mammals had been taken in from the sea, showing that what was now covered by the sea must have been then dry land. As to the cave dwellers of the South of France—whose period was indistinguishable from the neolithic or new stone age—they represented a comparatively advanced order of civilization. Perhaps one of the most interesting things in the history

of science had been the discovery of carved bones in those caves in the South of France—showing drawn or scratched representations of the animals hunted by them—representing the mammoth, the wild horse, the reindeer, and fishes. These drawings were bigger in artistic power than any drawings of contemporary savages. In conclusion, he said that up to the present the search for implements of the palaeolithic period in Ireland had been directed to flint objects practically altogether. He suggested that objects fashioned out of such hard kinds of stone as quartzite should be looked for, as it was not unlikely that remains of the palaeolithic period fashioned out of such materials might be found.

Mr. F. Elrington Ball read a paper on "Tallaght, Co. Dublin, and some places in its neighbourhood." He gave a brief sketch of Dolphin's Barn and Craulin, whose church tower was of some antiquity. The Castle of Drimnagh, an oblong castle of the Anglo-Norman period, was next described. For upwards of four centuries this castle was occupied by the great family of Barnewall. Clondalkin was remarkable as the site of one of the Three Round Towers still to be seen in the County Dublin. It differed from most other round towers in a singular projecting base, considered by Dr. Petrie to be part of the original design, but generally supposed to be of modern construction. It was 84 ft. in height. No traces of the original church remained. In the 16th century Clondalkin was accented one of the walled and good towns of the county. On the road from Clondalkin to Tallaght, Newlands was passed, and adjoining it was the Castle of Belgard, once a strongly fortified dwelling. It was deemed one of the most important castles of the Pale, and often served to protect the surrounding country from the incursions of the O'Byrnes and O'Tooles. Not far off was the Castle of Ballymonat, or Baile Mota, the town of the moat, which was locally supposed to have been connected with Belgard by an underground passage. Tallaght itself bore few traces of its antiquity and former greatness as the site of a religious house from very early times, and as the chief seat of the Archbishops of Dublin for five centuries. It was said to derive its name, which signified "plague-monument," from being the burial-ground of 9,000 of the earliest colonists of the country who were carried off by plague in one week. The ancient Church of Tallaght was replaced in Anglo-Norman times by a church, of which the belfry still remained, and which had probably some pretensions to architectural beauty. In the churchyard there were the remains of an ancient stone cross, known locally as "St. Molrooney's loaf and griddle," and a very large stone fort, which was known as "St. Molrooney's losset." Mr. Eugene O'Curry thought it was intended for the baptism of adults, and Mr. Handcock said it was traditionally stated that it was used for washing the feet of pilgrims who frequented the sacred shrines of Tallaght. In the petition presented by the churchwardens in 1662 with regard to the destruction of their church by Captain Allend, they complained that he fed his horses in the fort, and Mr. Handcock suggested that this must have been the losset. There were several old tombstones. Proceeding now to Oldbawn, the lecturer said that this was an interesting old house of the seventeenth century, fast falling into ruin. It was built in the style then common, with wings extending from the house on each side of the hall-door, and encircling a small courtyard. It had high pointed gables and great fluted chimneys, and in the centre of the roof there was a small cupola, surmounted by a weathercock, with a clock bearing the date 1727. The hall-door was in a porch with pillars formed of round and square blocks of stone, placed alternately. The ceiling of the hall was low, with large carved beams dividing it into squares; the walls were wainscoted, and there was a curious chimney-piece on which were the arms of the Bulkeleys, who built the house, and with

heads on either side of the slab. The dining-room had a similar ceiling to the hall, and was also wainscoted. The chimney-piece in it, which reached to the ceiling, was a very remarkable one, representing, as Mr. Handcock supposed, the building of the walls of Jerusalem by Nehemiah. Passing by Allerton, they came to Mount Venus Cromlech, one of the largest of the rock monuments of the County of Dublin. Gabriel Beranger attributed the fall of the big stone from its supporting stones to the shock of an earthquake, and suggested that the formation of the Scalp, and a fissure in the foot of the Tybradin Mountain, was due to the same cause. Lastly, the lecturer dealt with Rathfarnham Castle, which, he said, was one of the great residences of the County Dublin. It was built towards the close of Queen Elizabeth's reign by her Irish Chancellor, Archbishop Loftus.

The paper was referred to Council for publication.

The following papers were referred to the Council for publication:—"Notes on Cran-nog and other Finds in Co. Wexford," by Sir Thomas Grattan Esmonde, Bart., M.P.; "The Monuments at Clonmacnoise," by R. A. S. Macalister, M.A.; "The Cryptic Element alleged to exist in Ogham Inscriptions," by R. A. S. Macalister, M.A.; "Kilmakilloge, Co. Kerry," by Miss Hickson, Hon. Local Secretary, Kerry, North,

#### BUILDING TRADE DISPUTES.\*

THE dispute between the National Association of Master Builders and the plasterers remains still unsettled, in spite of the lengthy conference which took place yesterday week. The union, by their written assurance to the effect that they did not wish to coerce anyone to become a member of their association, but simply claimed "the right and privilege to persuade" any plasterer working at the trade to become a member, had created a hope that this more reasonable way of looking at the matter would have brought about a mutual understanding as to this chief point at issue between the masters and the men. But, so far from endorsing this policy at the conference, the men's representatives not merely declined to ratify the assurance, but actually withdrew it altogether, and so left matters exactly as they were when the lock-out commenced. For the masters, finding they were not to have any guarantee that the unionists would not strike work if a non-unionist happened to be employed on the same job, declined to continue the conference. We consider that the plasterers have done their cause an infinitude of harm by thus going back on their word. To say that they cannot guarantee their individual members, is a very weak argument indeed. If the union can force their men to strike, they can surely find means to compel them to adhere to other rules and regulations, even to the avoidance of the "objectionable practices" the masters complain of. To attempt to persuade a man by argument is one thing; to attempt to coerce him by threatening to make him throw up his job, quite another and far more serious matter. Let the trade unions attend to their legitimate business of protecting the interests of their members, and leave the non-unionists to take care of themselves. There is little wonder that the National Association of Master Builders should seek to secure themselves against the intolerable interference with the business of their individual members which these constantly recurring disputes occasion. And all because there are many good workmen who prefer to eschew trade unionism and to preserve their independence. Other disputes in the building trade have occurred at Leicester and Scarborough. At Leicester the demand of the bricklayers' labourers for an increase of wages from 6d. to 6½d. per hour having been refused, 750 of them have struck work, and to these must be added sixty navvies and general labourers. The stoppage of these

men has brought out the bricklayers also, so that 1,500 men are now idle. The Scarborough dispute is on all fours with that of the plasterers. A certain workman in the employ of a certain builder declined to join the Labourers' Union. It was decided therefore to call out the union men, which was done. Thereupon some three hundred unionist workmen were locked out on the 6th inst., this step being taken on the decision arrived at by the Master Builders' Association. The masters have also resolved that the men should not be allowed to return to work until they "receive a written assurance from their union that in future they will not resort to steps of this kind, and that they will work side by side with non-unionist labourers, using the powers of persuasion if they think fit, but in no case to use coercion." All this is of very serious import to building owners as well as to the building trades. In fact, these constant disputations cannot but demoralise building enterprise all round, and one cannot help thinking that much of it might be avoided by a little reasonable conferring together of the parties to the dispute before things come to the pass of a strike or a lock-out. Surely in these days of imperial rescripts, and international arbitration undertaken in the interests of peace, we need not go to war amongst ourselves over industrial disputes. Cannot the masters and men agree that their several union executives shall have power to refer disputes they cannot settle themselves to independent arbitration, the result of which should be binding on both parties? This cut-throat business of trying to starve one another into submission is a relic of barbarism pure and simple, and quite unworthy of the civilised age in which we are supposed to live.

#### NEW CLUB-HOUSE FOR THE ULSTER YACHT CLUB, BELFAST.

THIS new Club-house is in the old English style of architecture, built with red Lagan Vale facing bricks, tuck jointed, and roofed with Peake's red pan roofing-tiles. The building is surmounted by a tower, which rises to a height of over 70 ft. above the ground level. The tower is bounded by parapet walls with white stone copings. These, with the neatly-pointed gables and gablets, and the numerous ornamental chimney stacks, set off most admirably the grouping of the several sections of the building. The approach to the principal entrances is by means of a winding carriage drive from Upper Clifton road, which continues past the verandah on the front or north-west side. The internal portion of the premises is divided into three flats. On the ground flat is the entrance hall, with its massive staircase; the wainscoted dining-room, 33 ft. by 21 ft., with an exit to the verandah; the strangers' room, ladies' rooms, the members' dressing-room, with the necessary baths and lavatories; also the stillroom, wine-cellar, kitchen, pantries, &c. The first floor contains what may be regarded as the principal rooms—viz., the club-room, the billiard-room, and the writing-room. The geometrical panelled ceilings in the club-room and dining-room are admirable pieces of workmanship. The floors of these rooms are of hardwood, with polished borders of various coloured hard-woods. Outside the club-room, and extending the entire length, is a balcony, access to which is obtained from this room. The remaining part of this floor, together with the second floor is made up principally of the sleeping apartments, of which there are fifteen. There are also lavatories, baths, and secretary's office on these floors. There are several features connected with the house that are worthy of mention. Besides the fireplaces and mantels—some of the latter of which are very elaborate and chaste, being specially made from designs by the architect—the house is heated throughout with Musgrave's patent heating apparatus. As well as the main staircase already men-

tioned, there is a back stairs communicating with the three flats, which serves the double purpose of a servants' staircase and an emergency escape in case of fire. The grounds are extensive and prettily laid out, the avenue and walks being covered with Ballycastle gravel. Stretching along the entire front of the house is the terraced lawn, suitable for bowling, croquet, and games of a like nature. Altogether, the new clubhouse is most compact and complete in every particular, and its architect, Mr. Vincent Craig, merits hearty congratulation on his work. Messrs. McLaughlin and Harvey were the contractors; Mr. A. Thompson executed the painting work; the decorations were placed in the hands of Messrs. Ward and Partners; and the plumbing and sanitary arrangements were entrusted to Messrs. J. Lowden and Co., all of Belfast.

#### NOTES OF WORKS.

The long-delayed project of the building of the spire to St. Eugene's Cathedral, Derry, is about to be proceeded with. A meeting to arrange the collection of funds, for the purpose, was held last week in St. Columb's Hall, and presided over by the Lord Bishop, Dr. O'Doherty. Some generous subscriptions were handed in, his lordship heading the list with £500.

The foundation-stone of a new Parochial Hall for the parish of St. Stephen was laid on the 7th inst., by the Archbishop of Dublin, on a site given by the Earl of Pembroke, on the Northumberland-road. The hall will consist of two main buildings. It will have a frontage of sixty feet, and the building will extend rearward to the depth of about 200 feet. The front hall, now in course of erection, will contain a reading-room, recreation-room, a lending library, a class-room, and apartments for the caretaker. To this will be attached the parochial hall proper, which will consist of a room for public meetings, and for drill and other purposes for the Church Lads' Brigade. Sufficient money has been raised for the erection of the front hall, and it is hoped that by the time this is completed, the Executive Committee will have been provided with funds to enable them to proceed with the building of the remainder of the structure. The site is conveniently situated, being nearly opposite to the schoolhouse, and within five minutes' walk of the parish church. The work is being carried out by Mr. Benjamin Millard, of Pleasants'-street, from plans prepared by Mr. J. F. Fuller.

THE INFLUENZA.—Now that the spring is fairly with us it may be hoped that we have seen the last of the influenza for a season. Unfortunately, however, this malady, the true character of which is still surrounded with considerable mystery, seems to have secured a permanent footing on our shores, and we may lay our account with its certain return with the advent of the cold weather next winter. The recent epidemic is one of the most severe we have yet suffered, and it has left behind it a sadly increased death-roll, especially among the weak and aged. Though it is true that our knowledge of the disease is still largely empirical, our experience has been sufficient to teach us this, that influenza has a fatal facility in finding out and attacking any weak points in the system, particularly in the chest and lungs, and the only safe conclusion that we can deduce is, that on the first appearance of the symptoms the utmost care should be taken to check its development by taking at once to bed and staying there until a normal temperature has been restored. In connection with the latest visitation, brought on by the sudden severe frost, it is curious to note the coincidence that a writer in the *Hospital* points out between the epidemic and the occurrence of the season of Lent, which produces in many people, as the writer says, "an impaired capacity to make head against the invasion of disease." However this may be, there can be no question that a lowering of the vitality leaves the subject especially open to attacks of the disease, and the plain moral is that to withstand its attacks successfully there is nothing like keeping up the bodily vigour by plenty of good food, fresh air, and exercise—in short, a strict observance of the general laws of health.

\* From the *British Architect*.

## PROPOSED

## ENLARGEMENT OF BUTT BRIDGE.

THE erection, within the past few years, of the "Loop Line" railway bridge, to the east of Butt Bridge, has deprived the Port of the income formerly derived from berthage of trading vessels at both quays up to O'Connell Bridge, for which loss the Port Authority was awarded the sum of about £3,000. In the original plans for Butt Bridge, the lately retired engineer to the Port and Docks Board made, we believe, provision for the removal of the swivel works in connection with it, and, by the substitution of a large central arch in unison with those already erected, convert the bridge into one entirely of stone. The subject of accomplishing this work is at present under discussion by the Board, and the present Engineer (Mr. J. P. Griffith) puts down the cost at about £24,000. He suggests an increase of 11 ft. in the width of carriage-way.

"Butt Bridge"—so named from the celebrated Isaac Butt, M.P., Q.C.—connects Beresford-place, on north side of the Liffey, with Tara-street, on the south. It consists of two stone arches—one on either side of the river—having respectively a span of 37 ft., and two water-way passages of 40 ft. on each side of the central pier or platform, on which the "swing" rests. The swing consists of two main wrought iron girders, 125 ft. in length, 9 ft. in height at centre, curving at ends to about 4 ft. high, with a series of cross girders upon which the roadway rests. The swinging (when vessels were needed to pass) was moved by a small steam engine.

The bridge was opened for traffic on the 25th of May, 1878. All the ironwork was supplied by the Skerrie Ironworks Company, Limited, Darlington, and was put up under the superintendence of their engineer, Mr. Nabholz. The swinging portion of the bridge was laid with native timber setts—viz., 18,000 beech blocks  $8\frac{1}{2}$ " by  $4\frac{1}{2}$ " by 3"—supplied to the contractor by Messrs. James Fitzsimon and Son, of this city; and the asphalt was laid by the Limmer Company. The bridge was designed by Mr. Bindon B. Stoney, late Engineer to the Port and Docks Board; and the general contract, foundations, stonework, &c., was carried out by late Mr. W. J. Doherty, and completed within four months of the time specified in the contract.

In the original competition for the erection of "Butt" Bridge, there were but six tenders sent in, although applications for specifications and forms of tender from English and other firms were numerous.

## BOOKS RECEIVED.

*Spon's Architects' and Builders' Price-Book, with useful Memoranda and Tables.* By W. YOUNG, Architect. Twenty-sixth edition. London: E. and F. N. Spon, 125 Strand.

We find that the work before us has, within the past decade, received additions to it of about 134 pages, and this, too, without an advance in price. In advertisement pages we note an increase of fifty. This alone would be sufficient to stamp the volume as a good medium for the announcements of parties engaged in the several branches connected with the building and cognate trades. The present issue is well printed and bound.

## MISCELLANEOUS.

**WORKMEN'S COMPENSATION ACT.**—More condemnation of the shortcomings of the Workmen's Compensation Act is forthcoming. Recently, in the Sheffield County Court, Judge Waddy said that he entertained a strong view that the Act, instead of improving the position of operatives, was doing them injury. Almost at the same time, the members of the Leicester and Leicestershire Trade Protection Society, at their annual meeting, came to the conclusion that the Act was turning out a very good thing for the lawyers, and that its limitations and difficulties of construction called for early amendment. This is the statute for which its sponsors claimed that it would simplify the law, diminish litigation, and effect a marked improvement in the position of the working man!

**THE ASHBURNHAM MANUSCRIPTS.**—On the 1st of May, Messrs. Sutheby, Wilkinson and Hodge, will sell, at their London rooms, that portion of the remarkable collection of ancient MSS. made by the late Earl of Ashburnham known as the "Appendix." It is of great historical, literary, artistic, and theological importance, and its dispersion will undoubtedly attract the attention of scholars and collectors throughout Europe and America. The Ashburnham MSS. (catalogued under 177 lots) are mostly on vellum and more or less illuminated, and they extend from the eighth to the seventeenth centuries, with two or three quite modern. The bulk of them, however, are the work of scribes of the thirteenth to the sixteenth centuries. In some cases the precious documents are bound in old pigskin or leather and boards, but the bindings are not generally contemporaneous with the writing. The last lot is a somewhat late copy of Wycliffe's Bible, in double columns of about sixty lines, written in the early part of the fifteenth century, and known as the "Bramhall MS." On one of the originally blank pages is this note:—"This book I will (God willing) leave for an heirloom to my right heirs of Bramhall.—William Darenporte, 1620." It was sold by one of the heirs, and was the last MS. bought by the late Earl of Ashburnham. It contains a complete copy of the later version of Wycliffe's Bible, the Old and New Testaments, including the Apocrypha, with the prologues to Barnab and Isaiah and those usually prefixed to the books of the New Testament expressly taken from Jerome. There are also Latin Bibles of the eleventh, thirteenth, and fourteenth centuries, a New Testament and Psalter of the thirteenth century, and the Four Gospels of the twelfth century, besides several Missals, Books of Hours, and Offices of various early dates.—*British and Colonial Printer.*

**DEALS OR BATTENS?**—There appears to be a considerable doubt, even amongst those closely intimate with the trade, as to what actually constitutes a "deal," and the action "Hine v. Messers," (reported on another page) hinged on the construction of the word "deal," the dispute being over extra freight charged on certain dimensions which the plaintiff stated were not in the stipulations of the contract. The case was tried before Mr. Commissioner Kerr, at the City of London Court, who gave a verdict for the defendants, quoting the definition of a deal as afforded in "Young's Nautical Dictionary." We have no knowledge of the work in question, certainly not as an authority in the timber trade, but the book appears to be part of the numerous law-books that the legal fraternity now and then refer to on matters that they are not practically acquainted with. We are not going to dispute the learned Commissioner's ruling, nor the authority he quoted from, but for the benefit of those who really want to know what is a deal on another occasion when the distinction between deals and battens is called in question. A deal, roughly speaking, is understood to mean a piece of sawn wood over 6 to 8 ft. long (8 ft. are sometimes called deal ends), 9 and under 11 in. wide and 3 in. thick. Two-and-a-half in. thick by 9 in. wide would be called a deal, but 2 by 9 in. some would insist upon calling a board. Should 3 by 8 in. be termed a batten or a deal? and if a deal, how should  $2\frac{1}{2}$  by 8 in. be designated? These are not questions of vital importance, and that there should be any difference of opinion, arises from the fact that of late years wood has been manufactured abroad into intermediate sizes other than the old-fashioned dimensions of 3 by 11 in., 3 by 9 in., and 3 by 8 in., &c., and there is now a sort of border-land of dimensions which the most experienced may well hesitate to classify. But the true definition of a deal, according to the Peterborough standard, which forms the basis of all contracts made in this country, is  $1\frac{1}{2}$  by 11 in. wide and 12 ft. long, or its equivalent in any dimensions. The distinction between deals and battens is regu-

lated more by custom than anything else, and is quite apart from the cubical contents of the wood, the dividing line being drawn at 7 in. wide; all sawn wood above that width is reckoned as deals. The generally accepted definition of a batten is  $2\frac{1}{2}$  in. and 2 in. thick, and any width above 4 in. and not exceeding 7 in., 3 by 3 in. and 3 by  $2\frac{1}{2}$  in. are usually termed scantlings, as well as 2 by 4 in., but the term batten would apply to them all. Taking into account the great diversity of sizes that now figure amongst the foreign imports, as well as from our American Colonies, it will be safest to let the dividing line between deals and battens be drawn at 7 in. in width—if under 3 in. in thickness. This practically brings the 3 by 7 in. within the deal sizes, but it is the simplest way out of the difficulty. An instance of the difficulty of solving this debated question is the minimum sizes given by the Swedish Export Timber Association, that deals should be at least  $2\frac{1}{2}$  by 9 in. wide, battens at least 2 by 4 in., and boards 1 by 4 in. Confusion as to the classification of certain intermediate sizes arises from the fact that for shipment they may be described differently than by the dealer. The favourite 2 by 4 in., for instance, is a batten for shipping purposes, but it is not considered a batten on this side.—*Timber Trades Journal.*

**THE BRITISH MUSEUM.**—An interesting account of the inner working of the British Museum is given by Mr. W. B. Northrop, in the *Temple Magazine* for March. It seems that newspapers upon their arrival are opened—i.e. the wrappers taken off—they are then folded, counted, sorted into alphabetical order, and registered in ledgers. After registration in the ledgers, they are again sorted into "London," "Provincial," "Scotch," and "Irish." The separate numbers are then placed away in a pigeon-hole allotted to each paper in the different rooms. With the exception of a few marked "Special," such as the *Times*, and certain leading provincial dailies, the papers remain in the Copyright Office until the end of the year, when they are collected, tied up in separate bundles, and made ready for the binding department.

**PROPOSED DESTRUCTION OF AN INTERESTING TOWER.**—Amongst its "Local Gossip," last week, an Exeter journal prints the following communication respecting the threatened destruction of the venerable tower of St. Sidwell's Church, Exeter, and which, for the benefit of our archaeological readers, we transfer to our columns:—"Is Exeter to let one of her few remaining features of antiquity slip out of her hands and go for ever, or is she not? This was practically the pith of the whole thing considered at the meeting held at St. Sidwell's Schools this week, called to view and discuss the state of St. Sidwell's tower. The spire—perhaps the ugliest in creation!—is doomed, and no doubt all your readers will be glad to hear this. Experts declare that after standing some seventy years, it will come down with a run in less than seventy days hence, if not removed at once—and so down it is coming, never, we are glad to know, to rise again. So far, satisfactory. But what about the venerable old tower itself? The network of scaffolding surrounding it has been swarmed off and on—more on than off—by diligent craftsmen for some weeks, with the result that all the deceptive lime work that coated it has been removed. The life's story of the whole thing now lies bare, and, he who runs may read, the results of the catastrophe, when, during the great disturbances some hundreds of years ago, bags of gunpowder, stored incautiously at the heltry, blew up and carried away a great part of the upper portion of the most venerable and interesting fifteenth-century church tower in our midst. Money, maybe, was not brisk in those days, and so, instead of remedying the damage by rebuilding the ruins in good old Heavitree stone as heretofore, brick burnt in pits in close proximity to where Mr. Hancock's kilns now stand, was used; and as brick patching stone never can look well, our forebears, probably remembering that charity covers a multitude of sins, thought stucco would hide deficiencies much in the same way, and so plastered up the lot! Thus and thus all there stood until a few months ago it became an ordeal to go to church at all. Falling lumps of cement, half as big as one's head, came down at intervals, and when at last a popular churchwarden nearly got one detached fragment plump upon his devoted head, things began to look serious. It was then that the professional aid of Mr. B. H. Harbottle, the cathedral architect, was called in. (Would that the same course had been pursued in regard to the portico of our venerable Guildhall.) Mr. Harbottle has prepared a capital design, capable of being worked out into a splendid tower, and suggesting entirely new work from somewhere about the level of the clock face upwards. So far, so good—so very good! But—there is always a 'but' in everything human—why have a new

\* In the number of the IRISH BUILDER for 15th May, 1877, will be found an elevation of the "New Swing Bridge east of Carlisle Bridge," taken from the engineers' drawing—Mr. Bindon B. Stoney, M. Inst. C.E.I.

tower at all? Why not jealously preserve this ancient historic campanile in our midst? Conserve it. Renovate it, if you like, but keep it exactly as it was when our pious predecessors in the fifteenth century raised stone after stone upon lines directed by the master-mason himself. Happily, this was the truly conservative feeling that prevailed at the meeting in question. St. Sidwell's is an old parish. It dates from the days of its patron saint, who was murdered at the instigation of her mother-in-law (how is it mothers-in-law always have been in such odious repute?) so long since as the eighth century—eleven hundred years ago. St. Sidwell's wants her tower restored upon the old lines—she longs for it to be a facsimile of what it originally was. Fortunately no man in the country could be named who can do this better than Mr. Harbottle. Let nothing be removed of the actual old stonework, and, when fresh stones are added, let them be replicas of what originally stood there; then, indeed, all will be able to look with pride at St. Sidwell's fair tower, and not with lowering heads and shame as when gazing at St. Mary Major's heavy-looking spire, and the remembrance of the charming old Norman tower—older than its neighbours in the Cathedral, it was said; an eleventh century tower ruthlessly destroyed (like our city gates) to make way for a questionable innovation. Surely our children and our children's children will cry shame upon their progenitors for such ill-starred vandalism."

**BIBLE-BINDING IN LONDON.**—A London Magazine recently published an account of a correspondent's visit to the University Bindery. The famous Oxford bindings are executed in a bindery in Aldersgate-street. Here the skins of upwards of 100,000 animals are used yearly to cover Oxford Bibles alone, and 400,000 sheets of gold-leaf are required to letter the backs of the volumes; the quantity used in gilding the edges being much larger. "I was much struck" (says the correspondent), "while watching the binders, by the great amount of what is probably unappreciated work which is put into good binding. There are so many things which if not done would be missed, but being done call forth no comment. On arriving at Aldersgate-street, the next event in the life of the sheet is to be folded. For the best books this is done by hand. Silk sewing is stronger than thread, and makes the book more compact. The rough edges of the book are then cut, the back made solid, and it is ready for gilding. The next process is the rounding of the back, and the corresponding hollowing of the front edge. The cheap books are done by machinery, and the best by means of a flat hammer."

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HISTORY OF

Dublin Hospitals & Infirmaries,

FROM 1188 TILL THE PRESENT TIME.

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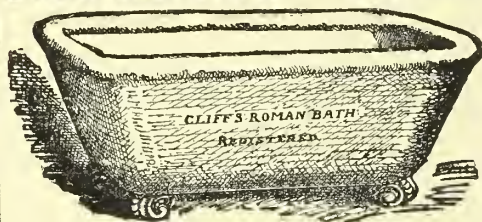
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## THE IRISH BUILDER.

VOL. XLI.—No. 944.

## HARBOUR WORKS, BUENOS AYRES.\*

AS early as 1862 the late Mr. Eduardo Madero, of Buenos Ayres, had turned his attention to the question of docks for the port of that city, but all applications to Congress for permission to construct a system of docks failed until the year 1882, when an Act was obtained under which the Executive Government were authorised to contract with Mr. Madero for the construction of docks and warehouses, together with entrance channels. The docks were to be constructed on the riverside of Buenos Ayres, between the gas-works on the north and the Riachuelo River on the south. On the recommendation of Messrs. Baring Bros. Mr. Madero applied to the late Sir John Hawkshaw, Past Pres. Inst. C.E., to undertake the engineering, and his firm reported in March, 1884. The report was subsequently approved, and the appointment of Sir John Hawkshaw, Son, and Hayter confirmed. A contract for the general work was let to the late Mr. Thos. Andrew Walker; a similar engagement being also made with Messrs. Sir W. G. Armstrong, Mitchell and Co., for the whole of the hydraulic machinery. In the preparation of the plans, two points had to be carefully studied, viz.: the exact position of the docks and the direction of the entrance channel. It was ultimately decided to place the docks parallel to the coast, and to provide locks at both ends. With regard to the direction of the channel, it was decided to turn it as quickly as possible into the run of the river, in order to avoid excessive silting. The works comprised:—A south basin with a water area of 35 acres, and a depth of 21 ft. 3 in. below low water. Four docks connected with each other by passages, crossed by swing-bridges, having a lock at the south end 65 ft. 6 in. wide and 442 ft. 9 in. long, with a depth over sills of 21 ft. 9 in. at low water, and at the north end a lock 82 ft. wide and 508 ft. 4 in. long, with a depth over sills of 22 ft. below low water. The two locks were each crossed by a swing-bridge, and the depth of water in the docks was 23 ft. 9 in. below low water. A north basin, having a water area of 41 acres, with a depth of 21 ft. 3 in. below low water. On the east side of this basin was the entrance to the North Channel, which was 100 metres wide at the bottom with slopes 10 to 1. It had been dredged to its intersection with the South Channel, a distance of 9·8 kilometres. On the north side of the basin were two graving-docks equipped with all necessary pumping machinery: one dock 600 ft., the other 492 ft. long, each having a depth of 20 ft. over the sill at low water. The total water area of the four docks and two basins was 174 acres, and the length of quays 27,821 lineal feet. Thirteen warehouses had been built on the west side of the docks, having a total capacity of 641,715 cubic yards, and a floor area of 202,751 square yards (41·89 acres). Eight sheds (one bonded) had been constructed, having a total capacity of 122,040 cubic yards, and a floor area of 27,870 square yards (5·76 acres). The whole of the foregoing works were enclosed by an outer wall nearly three miles long, of which 7,793 lineal feet were of stone construction, the remaining portion being of timber. There were railway lines on both sides of the docks connected with the north and south trunk lines of the Republic. The docks, passages and lock-walls were all built of rubble masonry of granite, the coping, bedstones, quoins, steps and machinery foundations being of ashlar masonry of granite. In one month alone

17,488 cubic yards of rubble masonry were built, requiring some 26,700 tons of stone from the contractors' quarries. In order to carry out the works, banks had to be formed to enclose the different sections. At the south end of the south basin, owing to depth of water and the tide, crib-work was constructed so that side-tips could be used, thus depositing the material more rapidly to form the bank. As each dock was completed a timber dam was erected in front of the passage which connected the completed dock with one to be constructed. The pile-engines used in the construction of the outer wall were the first constructed of their kind. They were really steam-hammers, but instead of the hammer-head moving and the cylinders remaining stationary, the hammer-head was fixed and the cylinder struck the blow. From the entrance of the north basin to Ko. 2·3 the dredging of the north channel was in tosea, with a layer of sand at the top. From Ko. 2·3 to Ko. 4 it was in mud intermixed with sand, and from Ko. 4 to the end the dredging was in mud. The mud and sand were brought and pumped ashore, and the total area filled represented 294 acres. Great difficulty was experienced in landing the tosea dredged, amounting to 651,700 cubic metres. The channel had six beacons in the length of Ko. 9·8. Buoys were moored every 1,000 metres apart. The channel was not yet completed to deep water. When the plans were prepared it was intended that the Government, who were dredging the south channel, should complete a channel from the intersection to deep water by the time the north channel was finished to that point, but such had not been the case. The whole of the bridges, gates, sluices, capstans, cranes and lifts were worked by hydraulic power. The graving-dock walls were built of rubble masonry of granite, with altars, copings, steps, &c., of ashlar masonry of granite. In the west dock (first commenced) the invert was built of bricks, but as it was impossible to secure sufficient bricks to complete the second invert, concrete was substituted. The water was admitted to each dock by two sluices, one on either side of the dock, and with these two sluices the dock could be filled in about twenty minutes. The dock entrances were closed by ship caissons. The pumping machinery consisted of two centrifugal pumps with vertical spindles, each driven by a balanced compound condensing horizontal steam-engine, coupled direct to the pump spindle. The West Dock was completed in ten months from the date of the Act, and the East Dock, together with the pumping station, in fifteen months. The amount of work done during the fifteen months was enormous—including 56,464 cubic metres of rubble masonry alone. The total area of land reclaimed from the river was 926 acres, of which 561 acres had been made up more or less to quay level; and the total cost of the works was £6,997,360.

## ELECTRIC LIGHTING AT PORTRANE ASYLUM.

THE fortnightly meeting of the Governors of the Richmond Lunatic Asylum was held on the 27th ult., at the Board Room, Grange-gorman,

The Rt. Hon. T. A. DICKSON in the chair.

The Board of Control, in reply to a resolution adopted by the governors on the 13th instant protesting against the action of the board in giving the contract for the erection of the electric lighting installation at Portrane Asylum to a Belfast firm, stated the circumstances which led to that result. It was stated that the lowest tender received was that of Mr. Drennan, Belfast, at £9,436 17s., which was suddenly withdrawn owing to a rise in price of certain materials; the next lowest was that of Messrs. Porte, Sykes, and Co., Dublin, at £9,908 8s. 6d., but as this tender was not in accordance with the specification it could not be entertained. The next lowest tender was that of the Walsall

Electrical Company, £10,758, but they subsequently withdrew it owing to a rise in the price of materials since they had tendered. The next lowest was that of Messrs. W. Coates and Sons, of Belfast, £10,892, which was in strict accordance with the specification. This firm, the letter stated, carried out work of a similar character at Maryborough, Mullingar and Antrim Asylums in a most satisfactory manner, and the board would not, under the circumstances, have been justified in passing over their tender. It would be further observed that the lowest tender received from a Dublin firm for the work, in accordance with the specification, exceeded the tender accepted by £942 3s. 6d. Messrs. Handley and Shanks, who are engaged in the execution of the electrical engineering work at the Richmond Asylum, wrote in reply to a communication from the governors, stating that a complaint had been made through the secretary of the electrical trades union that the firm were not paying their workmen the recognised standard of fair wages. In reply they stated that, as far as they were aware, they were paying a rate of wages which was in accordance with the fair wage resolution of the House of Commons.

## THE HISTORY OF ST. WOLSTAN'S.

(Continued from page 45.)

As we have already mentioned, the romantic village of Leixlip was a very favourite Sunday resort of the Dublin city, during Lord Townshend's time in the Castle, the pleasure-grounds and gardens of which were, by his Excellency's orders, left open to the visitors, and he had strictly forbidden the gate-keepers, on pain of dismissal, to demand or accept any fees from the visitors to the place. His Excellency took great delight in sauntering about the demesne amongst those assembled—joining their groups and mixing in their conversations. In one of those saunters his Excellency fell in with a poor Dublin journeyman cutler, named Edward Bentley, with whom he entered into very familiar confab., and took much pains to shew him the beauties of the place. Bentley, who took him for one of the upper servants of the household, appeared much pleased by his attentions; praised the kindness of Lord Townshend in throwing open his demesne for visitors, but freely censured his politics. He pressed his attendant very much to come to the village tavern, and take a snack and a glass of punch with himself and his wife. This, however, the noble incognito declined. Bentley being about to depart, expressed his sincere wish that all Lord Townshend's servants were equally civil, and generously offered him half-a-crown for his trouble; but was quite astonished at the refusal of his doneur, adding that "this was not the case with all the servants, as the insolent fellow at the gate insisted upon half-a-crown, before he and his family were admitted." He then cordially shook hands with his new friend, and was going away; but the other insisted on his coming into the Castle, tasting Lord Townshend's wine, and taking a snack of what the pantry afforded. Bentley, now convinced that his friend was no less a man than the Viceroys' butler, accepted the invitation, followed into the house, and was shown into a parlour, while his friend, the supposed butler, went to give orders for his entertainment; and in a few minutes re-entered, and ushered him into an adjacent room, where a delicate cold repast was spread, with several decantors of Madeira and other wines. Bentley was pressed to eat and drink; and he zealously exerted his knife and fork and quaffed the choicing goblets of sparkling nectar with which his friend incessantly plied him. At length about to depart, he cordially shook hands with the butler; when presently, as they reached the hall, the gate-porter entered, who had extorted Bentley's half-crown in the morning. The supposed butler immediately demanded, how he had dared to transgress the orders he had received, by taking money

\* Paper by Mr. J. M. Dobson, M.Inst. C.E. Read at Institution of Civil Engineers (London) on the 18th ult.

from that gentleman? The fellow instantly dropped on his knees and begged his Excellency's pardon, promising never to be guilty of the like again. Poor Bentley, in astonishment, now found out that he had mistaken his man. The entrance of two other servants and the marked respect they showed to the butler, convinced him of his mistake, and he, too, immediately fell on his knees and implored forgiveness for the liberties he had taken with his Excellency. Lord Townshend, highly diverted with the awkward confusion and embarrassment of his guest, called to one of the servants for a sword, which was instantly brought him; and which poor Bentley supposed was intended, at least, to take off his napper. The Viceroy drew the awful weapon from its scabbard, and flourished it three times over the devoted head of his guest; and then, with a gentle thwack across the shoulders, said to him: "Rise, Sir Edward Bentley."

This unexpected issue of the affair greatly surprised and delighted the new-made knight, who was forthwith appointed cutler to his Excellency, and lived many years to hear the honours, and tell the story of his creation.

The following is another example of Lord Townshend's propensity to mix himself *incoq.* among the lower class of society. The lower order of the Irish are said to have been proverbially eminent as well for the readiness of their wit, as the oddity of their phrases and conceits; and a Dublin shoe-black or a fish-woman often displays a capacity for *bon mot*, that, in more polished life and language, would excite admiration.

Lord Townshend took great delight in listening to the jokes and repartees of the rabble, and often walked *incoq.* to enjoy these traits of wild witicism, just as they sprung from the untutored fancies of the mob; who, in a ceaseless propensity to the humorous, scorned to speak of anything in common language or serious expression, but are eternally cutting jokes upon each other, and coining cant appellations for everything, which, to the ear of a stranger, would be scarcely intelligible without a glossary, and therefore can be only enjoyed by those who constantly hear and understand their idioms.

Amongst the wits of this class who caught Lord Townshend's fancy, was a shoe-black, or, to use his own phrase, a genteel Japanner, named Blind Peter. *Japanner* was a nickname given to the shoe-blacks in the last century, who were, as the late Rt. Hon. John Edward Walsh, Master of the Rolls, in his very interesting *brochure*, "Ireland Sixty Years Ago," a numerous and formidable body, the precursors of Day and Martin, till the superior merits of the latter put an end to their trade. The polish they used was lampblack and eggs, the latter of which they purchased in the markets, all rotten ones. Their implements consisted of a three-legged stool, a basket containing a blunt knife called a spudd, a painter's brush, and an old wig. A gentleman going out in the morning with dirty boots or shoes, was sure to find a shoe-black sitting on his stool at the corner of the street. He laid his foot on his lap, without ceremony, when the artist scraped the hoot with his spudd, wiped it with his wig, and then laid on his composition with his painter's brush. The stuff dried with a rich polish, requiring no friction, and little inferior to the elaborated modern fluids, save only in the intolerable odour exhaled from the eggs in a high state of putridity, and which filled any house you entered before the composition was quite dry, and sometimes tainted even the air of fashionable drawing rooms. Blind Peter, the *Japanner*, was of hideous aspect; he had but one eye; was most inveterately pitted with the small-pox, and had his face completely tattooed with the scars he had received in the various battles he had fought; for he was not only an eminent bruiser, but an adept in cudgel play, and a perfect champion at the faulchion; and, from his exploits, had obtained as many names as Venus. By some he was called

Old Terrible, by others Buckram, Chopping Block, Rugged and Tough, &c. He was, however, at the head of the gutter wits of the day, and most incontinently addicted to whiskey.

Lord Townshend and Mr. Courtenay, passing one day through Essex-street, upon a joke-hunting lounge, descried the operator near the Coffee House, and he immediately hailed them—"Boots Black, yer Honors! Shall I japan your trotter-cases? By de hokey, I'll polish 'em tight, and then trade upon 'em." The wits passed him by without seeming to notice him. Peter continued, "Well; as I suppose you're a pair of poor scrabs, that can't afford me full price—Come! I won't be hard on you; I'll blacken 'em both for a penny." The Viceroy and his companion took him at his word, as they conceived, and supporting their backs against the wall prepared to undergo the operation. Peter fell to work with what he called his case of instruments; and having blackened one boot of each, demanded his price. Lord Townshend said, "You havn't finished your job; you promised to blacken both for a penny." Peter, rolling his odd eye at both with a humorous look, "and so I did, yer honour, blacken two boots, and that's both, if I know English." The Viceroy, desirous to elicit something more from the fellow's fancy, insisted upon his first bargain; but Peter demanded his penny, and swore he wouldn't be done. They then desired him to finish the other two boots, and he should have his full price. Peter, shrugging up his shoulders, answered, "Ah! by de hokey, dat's a new bargain; I must have a hog a-piece if I blacken t'other two." The wits found they were completely had; for they must either walk to the Castle with a black hoot and a brown one each, or pay the demand, and thereupon agreed, in Peter's phrase, "to stand the gammon." When he had done, Lord Townshend asked him for change of a guinea.—"Change of a guinea!" answered Peter. "Is it change of a guinea you want from me? Blur an ounds, when did you hear of a robbery?—By de holy Moses, you might as well ax a Highlander for a knee buckle." Lord Townshend laughed immoderately, gave Peter the yellow hoy, and walked off well pleased with his bargain.

Mr. Courtenay, passing by Peter the following day, was again hailed with "Shall I do de job for you this morning, Misther? I'll work for nothing to-day, bekase you did de ting decently yisterday." Mr. Courtenay agreed to try him again, and stood up for a wibe. When his boots were polished he was walking away. "Is dat de way you're going?" said the operator.—"Why you promised to work for nothing." "Well," said Peter, "I've passed my word; and death before dishonour; but howsomever, you might do a body a favour.—I have a pint of de best whiskey in Dublin in pawn over de way, for a hog, and if you lend me the money to relase it, I'll give you share." This whim would scarcely fail of its effect, and Mr. Courtenay tendered him a crown-piece to get change and take the shilling. "Ah! blur an ounds," says Peter, "I see you want to humbug me again.—Where would I get change of a watch-wheel? but if you'll stay and take care of my shop, I'll go look for it.—But mind! honour's concerned, and I hope you won't nibble any of my property." Mr. Courtenay promised fair-play; and Peter set out with the five-shilling piece to get change, but forgot to return.

The property in Peter's shop, which was an old shattered basket, containing a broken pipkin with blacking, a pair of worn-out shoe brushes, and an old wig.

The day following, Mr. Courtenay stopped to upbraid Peter with his unpunctuality, and to demand his change. Peter, affecting to be in a violent passion, saluted him with the appellation of "Bloody Robber," swore that he ran away with his Cabinet of Antiquities yesterday, and particularly the wig, which belonged to Lord Chancellor Bowes, and that he would not

sell it for a guinea. Mr. Courtenay, diverted with this second hoax, walked off; conscious, however, that Peter's wit was rather an expensive commodity. Before finishing with Peter we shall give another instance of his wit.

This genius was one day summoned as a witness in a case of murder before the Criminal Court held in the old Tholsel in Skinner-row, before Baron Dawson, one of the judges of the Court of Exchequer. Peter, as usual, was primed with whiskey. One of his companions had mortally wounded a carman with his spudd or scraping knife, and Peter attended as a witness for the prisoner. After a description of the circumstances which led to the catastrophe, in a style of phraseology perfectly unintelligible to the court, Baron Dawson observed: "This witness is quite beyond my understanding. Pray, fellow, be more explicit, and tell us what you mean." Peter answered: "Blur an ounds, my Lord, sure I'm not obliged to find you evidence and understanding too, and if your Lordship doesn't know de languages, dat's not my fault."

The learned judge, finding the best way to manage the witness was, to bid him tell his own story in the plainest way he could, Peter proceeded:—

"Well den, plase your Lordship, my gossup at de bar, was challeng'd by de carman to shy de coppers for a pint of de stuff; and so dey pulled out their louse traps, and toss'd up for de best in tree. Music says de carman, mazzards says my gossup; and he won. You flushed dem, by de hokey, says de carman. You lie, by G—, said my gossup. So wid dat, my Lord, dey agreed to edge de makes at a motty; but dere de carman had no change, for my gossup touched de spudd so tight every pitch, dat if it was butter he'd ha' stuck in it. So upon dat, your honour, de carman miffed and began to be snotty. "Your soul to de gallice," says my gossup, "what de ye mean by dat. If you've a mind for a row, peel yourself, and we'll see it out in a genteel way." My gossup is as tight a bit of flesh, my Lord, as ever nipp'd de weed. And so upon dat, de carman didn't do de decent ting; for while my gossup was blanching his bacon, and just taking off his flesh bag, what does de carman do, my Lord, but he gives him a dab wid his daddle upon de snorter-box, and brought de claret about his mug. "Blue blazes to your soul, you bluddy tef," said I, "dat's not fair! You struck de man in his own shop" (for my gossup had his foot in his basket all de while). So wid dat, my Lord, he struck him again; and so my gossup up with his chir, and swore he'd give him guts for garters; but I duu'na how it happened dat de carman fell ageu him, and somehow or oder, my gossup greased the chir in his tripes."

The judge, who was not the mildest man in the world, said to the witness, "Get down out of the witness box, you ruffian, there is no understanding your jargon."

Peter with great gravity, replied: "Oh! hy japers, since dat's de case I'm off; but I'll call to-morrow when you're sober; may be you'd be civiler den."

Perhaps a glossary to the evidence given by Peter may be as necessary to the reader, as it was to the judge. To sky de coppers, means to toss up halfpence; louse-traps, their combs used in tossing; music, signifies harps (the impression on Irish halfpence); mazzards, heads; edging de makes at a motty, meant pitching halfpence at a particular stone, and he that pitched nearest was the winner; stuff, meant whiskey; miffed, meant got angry; and snotty, meaus saucy; nipping de weed, implies chewing tobacco; peeling, or blanching his bacon, meant stripping naked; dal with his daddle upon the snorter-box, and bringing the claret about his mug, means a blow with his fist that produced a bloody nose; and thir, was the short scraping-knife used by the shoe-blacks.

With these illustrations the testimony of Peter may, perhaps, be somewhat intelligible to the readers.

With one more anecdote we shall bid good bye to Peter, and return to St. Wolstan's. One day, Peter, plying his trade upon Essex Bridge, was occupied in titivating the boots of a dashing buck whom he knew to be the son of a milk woman. While in this operation, a country clergyman stood up to have a pennyworth of decency upon his boots; and, on the departure of the former, Peter asked his reverend customer "if he ever read the Scriptures about the marriage of Caana in Gallilee?"—"Yes, my friend," answered the simple clergyman with some surprise. "Then," says Peter, "de mother of that macaroni dat just went away, performed a greater miracle than our Saviour did there; for he changed water into wine, but, by the hokey, she changed buttermilk into silk gowns and silver cups."

On the 30th November, 1772, Lord Townshend was recalled, after having spent five years in the government of Ireland, during which time he lived in lordly style at Leixlip Castle, and also, during Session, held a princely court at Dublin Castle. His successor was Earl Harcourt, who, during his viceroyalty, rebuilt Bermingham tower, and re-named it "Harcourt Tower." His name is also preserved in one of our principal thoroughfares—"Harcourt-street."

(To be continued.)

#### DUBLIN AND SUBURBAN WORKMEN'S DWELLINGS COMPANY.

An extraordinary general meeting of the Dublin and Suburban Workmen's Dwellings Company was held on the 14th ult. in the offices, 41 Dame-street,

Mr. W. M. BATTERSBY presiding.

The meeting was summoned to consider, and, if approved of, adopt the following resolutions:—

"That the present directors—namely, Wm. M. Battersby, E. P. Culverwell, F.T.C.D.; F. Harman Orr, and T. S. Murphy, be, and are hereby removed from the offices of directors of the Dublin and Suburban Workmen's Company, Limited."

"That John J. Burke, Clonellan, Bray; Thomas Ritchie, 43 Dame-street, Dublin; William L. Ryan, 13 Clyde-road, Dublin; and Charles Cummins, 1 Foster-place, Dublin, being duly qualified, be and are hereby appointed directors of the Dublin and Suburban Dwellings Company, Limited."

The Chairman said he had very little to say, but since the previous meeting, at which Mr. Murphy, one of their directors, resigned his position, Mr. Culverwell had written to him (the chairman) a letter, in which he stated he wished to let them know that he had resigned his directorate and ceased to be a shareholder in the company, in consequence of his taking legal action; but this did not arise from any hostility to the company, but was due to the fact that he was advised it was necessary to take such action for his protection as a creditor. Speaking for himself, the chairman said Mr. Orr and he did not think it necessary to resign. They thought it well to meet the shareholders and give an account of their stewardship, as they felt they had done everything that was right, and had done nothing to be ashamed of. They were glad to find that, with one exception, all the old shareholders supported them. The one who did not was Mr. Worthington, on whom they thought they had some claim. Nothing remained now except for him (the chairman) and Mr. Orr to tender their resignation, which they now did, and he would, therefore, vacate the chair, and ask some one to take his place.

Mr. Worthington said the chairman had been good enough to single him out, but he must remark that they were perfectly satisfied that the directors were gentlemen of honour and business capacity. He believed they had no reason to complain. The preference shareholders were kept years without a dividend, although the company were earn-

ing quite sufficient to pay them one. Having regard to the fact that the property and earnings of the company would have enabled the directors to declare a dividend, they did not treat the preference shareholders properly in being led by Mr. Culverwell, their chairman. Mr. Culverwell had a special interest in getting paid principal as well as interest, and the directors paid him both. In his opinion, the position of the company was a strong one. They had a net income of £1,500 a-year, and they only owed about £8,000 to the Board of Works, on which they paid about 3½ per cent. Now they owned nearly 400 houses, and with a property of that kind they had every right to expect their dividend. He might refer to about 200 houses that they did not owe a shilling on to the Board of Works or anyone else, and which provided a substantial profit. Why then should the preference shareholders be passed over to allow the Board to pay off capital as well as interest. Undoubtedly the interest should be paid, but he objected to the preference shareholders being left without their dividend.

A shareholder—Kindly mention the property.

Mr. Worthington said he referred to the Inchicore property. Now that Mr. Culverwell had resigned, and that the influence which he complained of was off the board, he was perfectly willing that Mr. Orr and Mr. Battersby should remain as directors, but he thought he was perfectly right in supporting the change, especially having regard to the fact that the directors were about to take a few of their principal shareholders into their confidence, and try to devise means that would satisfy all parties.

Subsequently, Mr. Cummins took the chair, in place of Mr. Battersby, and the resolutions mentioned above were eventually adopted.

#### THE ROYAL IRISH ACADEMY.

A GENERAL meeting of the Academy was held on the 24th ult.

Mr. J. RIBTON GARSTIN, D.L., presided.

Mr. J. Cooke Trench moved:—

That the Royal Irish Academy desire to place on record its deep sense of the loss sustained by the death of Dr. William Frazer, Librarian of the Academy, who had been for over thirty-three years a member of the Academy, and for eighteen years a member of its Council, and frequent contributor of papers at its meetings. The Academy tenders its sincere sympathy to Mr. Frazer and the other members of his family.

Professor O'Reilly, in seconding the resolution, said Dr. Frazer was not merely distinguished in his profession, but was known to them all for his many-sided knowledge of methods of science, antiquity, and art. His general kindness, his readiness to render service, and his aptness to give advice, rendered him to one and all of them a dear and willing collaborateur, and one whose loss they profoundly and sincerely regretted.

The Chairman, in putting the resolution, said they all sincerely regretted the death of Dr. Frazer, following, as it did, so soon after that of Sir John Gilbert.

Professor O'Reilly contributed a paper on "Volcanic Eruption Dates and their concordance with the Sunspot Period." This was not, he said, a new question, but he did not think it had received adequate treatment. They all knew that sunspots occurred periodically in maxima and minima. There was no complete catalogue of volcanic eruptions, but he had taken a series of dates of eruptions of five volcanoes in Iceland, and had compared them with sunspot periods from the year 1619, and he had found about seventy-seven correspondences, sometimes with the maxima and sometimes with the minima of sunspot development.

Professor Grenville Cole moved that the paper be referred to Council for publication, and suggested that the concordances might be attributable to a residual pulse, which beat in the earth in the same periods as in

the body from which the earth originally became detached.

Professor Barrett seconded the resolution, which was adopted.

Mr. Thomas J. Westropp, M.A., contributed a paper on "Some of the lesser 'Castles' or 'Pele Towers' in Co. Clare."

#### LAW.

##### DAMAGES TO PREMISES BY THE ERECTION OF A STEAM ENGINE, &c.

HIGH COURT OF JUSTICE—CHANCERY DIVISION.

[Before the Master of the Rolls.]

*Flynn v. Pile.*—This was an action by Mr. William Flynn, dairyman, 103 Great Brunswick-street, against Mr. James P. Pile, builder, for an injunction to restrain defendant from continuing the erection of certain buildings in his yard adjoining plaintiff's premises; and damages for a nuisance and injury to the plaintiff's house by such erection, and by the noise and vibration of a steam engine and machinery on the premises, and for the deprivation of light and air. Defendant traversed the causes of action, and pleaded that no injury was sustained by the plaintiff.

Among the witnesses examined for the plaintiff were Mr. W. G. Doolin, C.E.; Mr. Cecil Orr, C.E.; and Rev. H. Murphy.

Mr. Mitchell, C.E., and Mr. Rathven, C.E., were examined for defendant.

Mr. C. L. Matheson, Q.C., and Mr. A. Todd appeared for the plaintiff.

Mr. Campbell, Q.C., M.P., and Mr. G. W. Oulton appeared for the defendant.

The evidence on both sides having concluded, Mr. Campbell, Q.C., said the parties had come to a settlement, which provided that all further proceedings in the action should be stayed; that the defendant undertakes to remove the steam whistle and to cease to emit steam; to remove the cause of the vibration, the cost not to exceed £50; to pay £50 damages for the injury already done to plaintiff, and to pay the plaintiff's costs.

#### RATHDRUM PARISH CHURCH.

[COMMUNICATED.]

RATHDRUM Church, which has been recently restored, was on Thursday last solemnly dedicated by his Grace the Archbishop of Dublin. Among the large contributors to the restoration of the church are the names of Earl Fitzwilliam, Earl of Meath, Lord Iveagh, Lord Ardillan, and Mrs. George Leeson. In the year 1617 Rev. Robert Pont was appointed by King James I. to the vicarage of "Silva Salvatoris" (St. Saviour's Forest), otherwise "Rathdrum." In the following century four vicars held the post, the last of whom, Rev. Richard Stronge, pulled down the church and rebuilt it and the rectory 103 years ago. In this century four rectors have been appointed, the second of whom, Rev. William Guinness, brother to the late Sir Benjamin Lee Guinness, and first cousin to the present rector, was appointed seventy-six years ago, and held the living thirty-three years. He greatly enlarged and restored the church and rectory sixty-three years ago. He was succeeded by the Venerable Archdeacon Galbraith, and the present rector, the fourth in this century, has succeeded, with the able assistance of the Select Vestry, from plans drawn by himself, so completely in restoring the church, that it is now one of the brightest and handsomest in the dioceses. The old heavy side galleries, high square pews, and lofty pulpit over the Communion Table in the east window, have disappeared. The church has now three aisles, choir, and chancel, beautifully tiled and furnished with handsome benches and choir stalls, all made by Brooks, Thomas, and Co., of Dublin, on whom they reflect the greatest credit. The west gallery, porch, and carved oak Communion Table were made by local carpenters

in first-rate manner. The latter was presented by them to the church. The handsome cover was presented by Mrs. Littledale, as also was the brass pulpit desk. The pulpit, a beautiful stone and marble structure, dedicated to the memory of the late Mr. George Leeson, of Rathdrum, also the chancel arch and panelling and the east window, were all manufactured by Messrs. John Earley and Co., of Dublin. They are admirable specimens of what stone, marble, and glass work can be produced in Ireland. The east window is a beautiful illustration of floral design in mediæval glass of excellent quality, with carefully-arranged emblems, surrounded by scroll-work texts describing the life of our Saviour, which form a complete and most interesting subject of meditation.

#### THE LATE SIR JOHN MOWBRAY.

SIR JOHN MOWBRAY, who died on the 21st ult., in his eighty-fourth year, was member for Oxford University. He entered Parliament in 1853, and represented Durham. Thus he had seen continuous parliamentary service for forty-six years, and was the "Father of the House," the next to him in point of time being Mr. Bramston Beach, M.P. for the Andover Division. Mr. Beach is ten years the late member's junior, and first took parliamentary honours four years later than the late Sir John.

Sir John Mowbray, of Warrens Wood, Reading, was born in Exeter, on the 3rd June, 1815, being the only son of the late Robert Stribling Cornish (a builder in Exeter) and Marianne, only child of John Powning, of Hill's Court, Exeter. He was educated at the Exeter Grammar School, then at Westminster School, and was a student at Christ Church College, Oxford. He took his B.A. degree in 1837 and his M.A. in 1839, having the honorary degree of D.C.L. conferred on him in 1869. In 1836 he was made President of the Oxford Union Debating Society, and in the same year he obtained a second-class in classics. In 1847 he married Elizabeth Gray, only child of Mr. George Isaac Mowbray, of Bishopwearmouth, Durham, and of Mortimer, near Reading, and assumed the name of his bride by Royal licence. He was last at the House on the 17th of April, when, being taken with faintness, he was conveyed home to Onslow Gardens, N.W., where he lingered until he died. That was his first appearance in Parliament since the recent death of Lady Mowbray, to whom he was devotedly attached. The deceased baronet, who leaves three sons and three daughters to mourn a double loss, up to the last displayed a keen interest in the well-being of his native city, Exeter. Only a few months ago Sir John and Lady Mowbray visited Hill's Court House, where the former's father resided for many years, and ultimately died, afterwards going over Messrs. Harry Hems and Sons—extensive ecclesiastical studios, which are situated almost opposite. Hill's Court House—which contained in its hall a superb 15th-century mantelpiece of carved Beer stone—will probably be a thing of the past by the time these lines are in print, being now in process of destruction by the speculative builder who is commissioned to lay out the once beautiful little estate into a miniature village of "eligible villas." Mr. Robert S. Cornish, the father, was for many years the Cathedral Surveyor at Exeter. At the last annual dinner of the "Old Boys," at the Exeter Grammar School, the late genial baronet presided, and made one of the happiest speeches ever recorded upon the annals of that ancient and mediæval scholastic establishment. The present premises were built some twenty years ago from designs by Mr. W. Butterfield, architect.

NEW NATIONAL BANK, KINGSTOWN.—The tender of Mr. Henry Pemberton, Ballybrack, for the erection of this building has been accepted. Amount £7,000.

#### THE DECORATION OF ST. PAUL'S, LONDON.

THE Society for the Protection of Ancient Buildings has addressed the following letter to the Committee for the Decoration of St. Paul's Cathedral:—

The Society for the Protection of Ancient Buildings is very anxious to urge upon the Committee for the Decoration of St. Paul's Cathedral that the work has now reached nearly the only point which will occur of resting, and reconsidering their aims. At the present time the nave and the transepts in a large degree represent the church as left to us by Christopher Wren; any injuries which these great portions of the building have sustained have been very much of the nature of accidents done in what we may call the days of ignorance, they have not been parts of a deliberate scheme for altering the general character of this great interior. Moreover, it is quite consonant with now ruling ideas of propriety to subject the eastern limb of a church to treatment separate from the nave and transepts, so that, as we have said, the work of decoration could be concluded now without any sense of incongruity arising from a supposed lack of completeness. This course the society ventures most respectfully and earnestly to urge upon the committee as opposed to any course in the nature of a compromise—such as continuing the works on a tentative or less extensive scale. The thing most worth considering is, in the opinion of the society, how to preserve a large portion of the building in the state in which we of this generation have known it, with all the effect of spacious restfulness, so greatly due to the soft, mellow colour of its magnificently wrought masonry. In speaking thus, the society does not refer only to the mosaics, but to all the works which have for their aim, not the protection and care of Wren's work, but the correcting and improving it, as is supposed, into something better. There is evidence on the north-east pier of the dome that it is intended to run an iron verandah railing all along the great cornice, and to do this would be such a fatal worrying of the interior that we can hardly suppose the committee will consent to it now the trial piece has been put in position. The retention of the plain white glass in the remaining windows the society considers is of the utmost importance—first of all from its authenticity and from the character and feeling agreeing with Wren's work, of which it is part; and, secondly, from the need for white light, not only for its own sake (and that is evident enough), but so as not to alter the lovely colour and tone of the ancient stonework. Any tampering with or wounding of the surface of this stonework comes as a shock, even if it be though so small in degree as the insertion of the bracket under Mr. Watts's picture. It is not a part of the duty of this society to criticise the mosaics and colour decoration on their merits, but simply to point out that they are revolutionary beyond all anticipation of probability, and entirely destructive of the ancient character of reverential peace possessed so lately by the Cathedral of London. In conclusion, the society ventures to hope that its well-known interest in the preservation of ancient buildings will be considered a sufficient justification for troubling you with this communication.

Signed on behalf of the Society for the Protection of Ancient Buildings,

ESSEX E. READE, } Hon.  
GEO. RUTTER FLETCHER, } Secs.

April 21st, 1899.

FOREIGN PLASTERERS FOR LONDON.—It is said that twenty Italian and French plasterers left Nice on Saturday for London. Their destination is said to be Messrs. Waring's factory at Hammer-smith, where they are required to replace the workmen who have been locked out. Five hundred others from various parts of Europe are reported to have left Milan with the same object.

#### FAILURE OF THE WORKMEN'S COMPENSATION ACT.

WRITING, on Saturday last, on the above topic, "The Times" has the following:—

It has long been plain that some of the expectations as to the results of the Workmen's Compensation Act prevalent when it passed have turned out to be wide of the mark. We have now abundant proofs of this in the report recently published by the Home Office as to the working of the Statute during the first six months after it came into force. The fact is that the Act is being worked in a very different manner from that contemplated by its framers. Business men have taken it in hand, and are dealing with it in a businesslike spirit. Employers, or, to be more accurate, insurance companies, which cover their risks, come to terms in regard to all claims not obviously fabricated or grossly exaggerated. They make the best settlement they can, and pay no heed to much of the complicated machinery of the Act. What is one to make of the fact that not a single case is returned from the mining districts of Durham, Consett, and Bishop Auckland, with a population of 312,000; from South Staffordshire, with a population of 575,000; from Plymouth and South Devon, with a population of 480,000; or Cornwall, with a population of 314,000? The sections relating to arbitration by committees of workmen are dead. Those relating to registration of memoranda are dead also. We might say almost the same with respect to the much-debated provision for certified schemes of compensation in substitution of the benefits conferred by the Act. The provisions as to medical references are also virtually dead; 207 were appointed in England and Wales, and only twice, according to the returns, were their services required. The Act as drawn is an elaborate scheme of compromise between conflicting interests; the Act as worked is a rough-and-ready scheme of compensation for all accidents in certain trades.

#### THE HOUSING OF THE WORKING CLASSES.

At the monthly meeting of the Municipal Council, Mr. George Macnie moved the adoption of the report of the Artisans' Dwellings Committee *in re* alternative building scheme for the Bride's Alley area. The new plan which they submitted was infinitely superior, and the reason of their proceeding was in order to make immediate provision for those who would be put out of their homes in consequence of Lord Iveagh's scheme. He desired to incorporate in his resolution also the following resolution, which stood in the name of Mr. Joynt:—

"That the resolution of Council of the 6th February, 1899, referring to the committee of the whole house the report of the Artisans' Dwellings Committee, No. 129, 1898, submitting an alternative building scheme in connection with the Bride's-alley area, be, and it is, hereby rescinded. That the further report of the Artisans' Dwellings Committee, No. 43, of 1899, altering the previous plans in consequence of the clearance to be effected by Lord Iveagh under the Bull Alley Area Improvement Bill be, and it is, hereby adopted. And, that the Artisans' Dwellings Committee be authorised to do all things that may be necessary to legally carry out the alterations suggested in their report."

Mr. P. J. McCall seconded the motion.

Mr. Lenehan thought that "sky scrapers" and buildings of enormous height should not be allowed to be placed there, necessitating that poor and old people should climb to the top storey. Nothing higher than a three-storey building should be allowed.

Mr. Harrington suggested that it might be better to wait for a broader and more comprehensive scheme of providing houses for the poor, than to rush into a scheme of this kind.

Mr. Brown said that the amended scheme was that the buildings should be increased from three storeys to four storeys in one case, and from two storeys to three in the

other. There was not room for providing for the people with less lofty houses.

Mr. Clarke said they had to have regard for the wants of the people, and there was great urgency in the matter. The people did not want to leave the neighbourhood, and it was necessary to have these four and three-storey dwellings.

Mr. Hutchinson, although in favour of one-storey dwellings, supported the scheme, on the ground of expediency and justice.

Mr. Lenehan moved as an amendment that the scheme be proceeded with at once, no building to exceed three storeys. He was himself in favour of one-storey buildings, but they must have regard to the restricted space at their disposal. They were, in having such large houses, only perpetuating the tenement system. He would strenuously oppose putting up "sky-scrapers." Three storey buildings were quite high enough.

The resolution proposed by Mr. Macnie was adopted by a large majority.

### WIRELESS TELEGRAPHY.

THE civilised world has now got to that stage when it scarcely wonders at the marvellous discoveries made with electricity, which has made the world so small during the last half of this century. One of the latest and most successful results accomplished by this means is Wireless Telegraphy, so called because there are no connecting wires used between the transmitting and receiving points. It is now just a month since the first message by this system was sent across the English Channel, the points chosen for the experiment being Wimereux on the French side, and the South Foreland Lighthouse on this side of the Channel. The first message sent was on the 28th March, with excellent results, and since then messages have been sent across every day irrespective of the condition of the weather. It is of importance to notice what a great advantage this system must be, instead of the usual cable method, which must be, for sometimes if the weather is very bad the cable gets injured and is useless till repaired, whilst this system can be, and is, used in any condition of the weather. Telegraphing without connecting wires is no new thing, for in 1895, when the Oban to Mull cable failed, a system was used with complete success by using parallel wires on each side of the Channel. This is not the only instance, for it has been used more than once across the Severn, the Dee, and also in India across the Ganges; in every instance messages were transmitted satisfactorily. It only remained, then, to devise a system which could be used on board a ship or in any place where it would be impossible to use the parallel wire system. There was not long to wait, however, for Mr. Marconi had invented the system which now connects England and the Continent. The base work of his system is founded on the electric waves, which are used for transmitting messages across space. A Morse key is used for breaking up the waves which are set in motion when the key is depressed. An interesting point in regard to this system is that it is possible for Mr. Marconi or his assistant to tell by the record on the receiving tape which of the operators on the other side of the Channel sent the message. Perhaps the most useful manner in which Mr. Marconi's system can be used is in connection with ships and lighthouses; it is in this that the system now in use holds the advantage over Mr. Preece's system with parallel wires. The usefulness of being able thus to communicate with moving ships or lighthouses is at once apparent, and has already been called into requisition at Dover, which is connected by the Marconi system with the lightship at the Goodwin (12 miles distant). The case was as follows:—Some weeks ago in foggy weather, a vessel got on the Goodwin; a wireless message sent from the lightship (where the men have been instructed in the system) to the South Foreland lighthouse was transmitted round the

coast by telephone, with the result that tugs and lifeboats were almost immediately on their way to the vessel's assistance, saving both ship and crew. The rate of telegraphing is said by Mr. Marconi to be the same as by the submarine cable. The chief disadvantage in connection with this system of wireless telegraphy has hitherto been that it has been possible for any receiver within a certain radius of the instrument transmitting the message. But within the last week a marvellous development has been made, and now Mr. Marconi is able to concentrate the electric waves which carry his dots and dashes, and is able to cut off his transmitting instrument from any receiver he likes. The amount of interest aroused by Mr. Marconi and his system in official circles is perhaps phenomenal, both in France and in England. Across the Channel, experiments have been taking place to try the system on battleships; but on this side of the Channel the interest is no less, for on the day when I was shown the instruments by Mr. Marconi, the latter had been visited by two official deputations to inspect the installation, and the previous day by the Board of Trade and the Trinity House. An interesting point brought to my notice by Mr. Marconi was the large number of press and business telegrams that are sent to him for transmission abroad; this because at present he makes no charge for transmitting them. Although it has been proved that the electric waves will pass through anything, it is not likely that wireless telegraphy will supersede the present system on land; but on and across the sea it will always be most useful, and will very soon, without doubt, be in great vogue, as the cost is so very much cheaper. Whether by this system we are any nearer to our friends in the planet Mars, as the Naval and Military Records suggests, remains to be proved.—*Cor. of Bath Journal.*

### MISCELLANEOUS.

Plans have been prepared for a new parish church for Milford, Co. Cork, for the Rev. W. Coughlan, P.P., by Mr. M. A. Hennessy, architect, Cork.

**NEW RAILWAY ENGINE.**—The Lancashire and Yorkshire Railway Company have constructed at their Harwich locomotive works a ten-wheeled bogie engine for express traffic which is believed to represent the extreme limit of dimension practicable on an English railway. The new engine weighs 58 tons 15 cwt., its tender 30 tons 13 cwt. 1 qr., making the total weight 89 tons 8 cwt. 1 qr. There is coal space for five tons; boiler pressure is 175 lb. to the square inch, and the size of the boiler quite abnormal. The smoke-box is so large that nearly as much of the chimney is inside as outside. It is an inside cylinder engine, but otherwise it bears much resemblance to the outside cylinder engines of the Great Northern. The designer is Mr. J. F. A. Aspinall, mechanical engineer of the Lancashire and Yorkshire Railway Company, and formerly of the Great Southern and Western of Ireland.

**BRICK STREET PAVING.**—It is somewhat surprising that bricks have been so little used for the paving of the carriage ways of streets in this country. In the United States they have been adopted with satisfactory results, and many miles of streets in Holland are paved with bricks, including the road from Utrecht to Commingham, twenty-seven miles in length. Whether the new brick introduced by Messrs. Wolliscroft, of Hanley, will lead to the adoption of brick paving for English streets we cannot say; but, at any rate, the material is worthy of trial. The brick has been tested by Mr. J. T. Eayrs, M. Inst. C.E., and it compares very favourably with American paving-bricks. The abrasion test was carried out by placing five bricks in a tumbler or rattler, 24 in. in diameter and 30 in. long, and giving them 1,000 revolutions at a speed of twenty-five per minute. The average loss amounted to 7.15 per cent. The test for absorption showed that the bricks are very dense, as the average gain per cent., after fifty-three hours' immersion, was only 1.57 per cent. The makers recommend that the bricks should be laid on a cushion of sand, 1 in. to 1½ in. thick, and then rolled and jointed with bituminous or Portland cement grout, the former being preferred on account of its greater elasticity, and because "it materially reduces the noise of traffic and absorbs

vibration." In the estimate of cost of this paving account is taken of the concrete foundation, which will certainly be necessary if the paving is to be at all satisfactory. This foundation is sometimes of gravel, but in America Portland cement concrete is now generally used. The bricks, we may add, measure 9 in. by 4½ in. by 2½ in., and all the arrises are rounded to a ¼ in. radius to prevent chipping. The average weight of the bricks is about 8 lb. 5 ozs., or about 136 lbs. per cubic foot. As the makers offer to "lay a street or portion of one" (!) as a test, we trust that it will not be long before a trial is made; there seems every reason to believe that brick paving will be less noisy than granite, less absorbent than wood, and less slippery than asphalt, but it remains to be seen whether it will combine to any satisfactory degree, the best qualities of these three materials.—*Builder.*

**A HERSCHEL TABLET.**—Sir Robert Ball unveiled on Saturday a bronze tablet placed on 19 New King-street, Bath, recording the fact that Sir William Herschel, the great astronomer, resided there. Bath abounds in historic houses, and the Corporation recently decided to place tablets upon a number of those formerly occupied by persons whose claims to remembrance are world-wide. The tablet on Herschel's house was one of the first to be put into position, and its unveiling on Saturday excited no little interest. Sir Robert Ball, in the course of an interesting speech, said that Herschel discovered the planet Uranus from the back-garden of that house, and on occasion he used to bring his telescope out into the street opposite that house, where many of his discoveries were made. By discovering Uranus he made the greatest possible advance in astronomy. It had been well said that the great importance of the discovery of Uranus was not so much the discovery of that planet as the discovery of Herschel himself.—*British Architect.*

**GLASS STONE.**—This new building material is now being manufactured on a large scale, and the results of some official tests show that it will resist a pressure of 2,023 kilos per square centimetre, whereas granite is crushed under a pressure of 650 kilos. It is also found to be unaffected by frost, and to resist attrition better than Comblanchien building stone or St. Raphael porphyry. Some of the advantages claimed for glass stone as a building material are its cheapness, hardness, resistance to atmospheric influences, and its non-porosity. It is also claimed that it is suitable for street-paving, as it is easy to clean, capable of withstanding the vibration of traffic, and does not (it is said) become slippery. Having regard to the fatal effects of the inhalation of even a very small quantity of glass-powder, we should recommend very careful examination of the material under the influence of incessant friction before permitting it to be employed as a paving material.—*Builder.*

**THE LABOUR QUESTION.**—The dispute between the master builders and the plasterers remains (writes the *Timber Trades Journal*) in much the same position that it did a month ago. Plenty of men outside the union are at work, and very little effect on the consumption of building material has hitherto been experienced. A firm of agents who receive considerable consignments, informed us the other day that they never knew a better demand for foreign imported laths than now exists, judging by the enquiries that daily come to hand; possibly this may arise from the fact that just now stocks are light, and the sport represents a forward policy in view of contingencies, when the dispute ends, though plasterers' laths are not generally good to speculate in. Labour disputes are chronic in this country, and at the present juncture are by no means confined to the building trade. In Glasgow the joiners have been kicking up a row over a halfpenny advance in wages, and 1,000 of them took a holiday while their employers considered the matter over. Others who stuck to their work saved a day, as the whole of the firms, some 400, in consideration of the busy state of trade, and the large quantity of work in hand, agreed to give the additional halfpenny, and so the dispute ended. The master builders, on the question of a general lock-out—if the occasion demands it—seem to be pretty strongly resolved, but we hope this will be rendered unnecessary, by a general return to work of the operatives who now refuse the masters' conditions. In a struggle of this kind in the building trade, the men, thrown on their own resources, would have no chance of success. Builders have no extensive plant or machinery thrown out of gear by a stoppage of work, time on contract jobs is the only consideration that would weigh with them, and this is a very slender reed for the operatives to rely upon. Besides, the shortness of funds and the general want of sympathy with kindred trades is another element of weakness on their side. The plasterers are locked out because they won't agree

to have a non-unionist foreman over them, the bricklayers are not wanted because the houses are unfinished, and carpenters for the same reason. So that people willing to work cannot work because comparatively small section of the house-building community are pig-headed. In our opinion, the Association of Masters generally is not half complete, and a great deal will have to be done in the shape of further amalgamation before the present tendency to dispute over trifles which govern the whole body of trade unionists throughout the kingdom, is stamped out. It will be for the benefit of the operatives in the long run. If trade is good and plenty of work and prices rising, the labourer has any reasonable grounds for asking a better wage—and a good workman will at such times obtain what he fairly demands, but it must not be contingent on the retention in the masters' employment of refractory hands, or tied with any conditions such as are now generally the backbone of labour disputes. Nobody in the timber trade appears to give serious consideration to the labour market, evidently under the impression that the present position of the master builders and their men is not going to culminate in a general lock-out, and this view we also take. Trade is so good in every direction that there is no need for apprehension—if a strike comes it can be no more than a temporary lull in the consumption, which, as soon as it is over, will flow on with greater strength than before it was interrupted.

**THE HOUSING QUESTION IN GLASGOW.**—The problem came before the Corporation of Glasgow last week in connection with a proposal to set aside two pieces of ground in the East End, containing approximately 73,000 square yards and 6,300 square yards respectively, for the purpose of erecting houses for the poor. The ground in question adjoins the Alexandra Park, and belongs to the Parks Department. The City Improvements Department proposed to buy it, at what price we are not told, but we believe a very low one. On the latter of these two plots it was resolved to erect buildings, not exceeding four storeys high, with houses of not less than two or three apartments, and on the other piece to erect houses of not more than two storeys, with plots of garden ground in front. Before these proposals were agreed to, there was a good deal of discussion as to whether the houses would meet the requirements of those for whom there was most need to make provision. Everything will depend on how they are built. The Corporation of Glasgow have made very earnest attempts in one or two cases to provide houses at very low rentals—in one place so low as £4 10s. a year for single apartments—and by careful management and selection of tenants they are making them pay, for they have been careful as yet not to commit themselves to the principle of throwing any part of the cost of such houses upon the rates. In the present instance it would appear that the houses are to be of a slightly better class. The scheme is the first outcome of the powers obtained by the Corporation under their Act of 1897, to purchase land, not exceeding 25 acres in all, within half a mile of the city boundaries, for the purpose of building for the poor, the total expenditure for this purpose being limited to £100,000.—*Sanitary Record.*

## GRIT STONE OF THE BEST QUALITY.

**R. TROY** has a quantity of the above in the ROUGH, and also some WORKED which she wishes to sell in her Yard at BRIDGE HOUSE, CLONASLEE, QUEEN'S CO.

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## HISTORY OF Dublin Hospitals & Infirmarys, FROM 1188 TILL THE PRESENT TIME.

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## THE IRISH BUILDER.

VOL. XLI.—No. 945.

ANNALS OF MONKSTOWN  
AND  
SOME NEIGHBOURING PARISHES  
IN THE COUNTY OF DUBLIN.By FRANCIS ELLINGTON BALL, M.R.I.A.,  
F.R.S.A.I.

## CHAPTER I.

## INTRODUCTION AND EARLY HISTORY.



N the annals, to which these chapters are an introduction, the history of the parishes of Monkstown, Dalkey, Killiney, Kill, Stillorgan, Kilmacud, and Tully will be found. These parishes were formerly appropriated to the Cathedral of the Holy Trinity, commonly called Christ Church, and formed, in the first half of the eighteenth century, what was known as the ecclesiastical Union of Monkstown.

They lie to the south-east of the City of Dublin, in the Barony of Rathdown. Though now divided into districts for the purposes of the Church, they are still recognised by the civil authorities, and are to be seen clearly defined on the maps of the Ordnance Survey. The three parishes first named—Monkstown, Dalkey, and Killiney—are bounded on the east by St. George's Channel, and encircle the bays of Dublin and Killiney. They include the populous townships of Kingstown, Dalkey, and Killiney, as well as part of the township of Blackrock, and are covered with streets, terraces, and villas, hardly a site being now unoccupied by a house. But one hundred years ago they were country parishes. Kingstown, with its seventeen thousand inhabitants, was represented by a small village called Dunleary. Dalkey and Killiney contained only a few houses. Indeed the increase in the population of all the seven parishes during the present century is very remarkable, and is strikingly shown in the fact that, while now twelve churches are necessary to afford accommodation for the members of the Church of Ireland, at the beginning of the century two—those of Monkstown and Stillorgan—were sufficient.

When our history opens, the country comprised within these parishes was covered with woods, bogs, and stony pastures. Here and there were to be seen clusters of small round houses, made of mud and wattles, surrounded by high banks of earth, and hedges of prickly thorn, with an occasional oblong house of larger dimensions, the residence of "a judgment distributing cow-keeper." On Dalkey Island and where Kingstown now stands, earthen fortifications erected for the protection of the coast were conspicuous objects, and along the shore ran a paved road—one of the five great roads of ancient Erin—which led to Tara, the seat of Supreme Royalty.

The district comprised within Monkstown and the other parishes was included in a country called Cualann, which embraced the southern portion of the County Dublin, and the coast lands of the County Wicklow. The

district formed probably part of two territories, Ui Briuin Cualann, or Cualann of the descendants of Brian of Cualann, and Clair Cualann or the plain of Cualann. The latter was famous for its trees, and has been described as "a mast bearing territory." To the country of Cualann, one of the first artificers of precious metals in Erin is said to have belonged, and the beer which was brewed in it was highly esteemed for its excellence. The Four Masters record the deaths of a number of the chiefs of Ui-Briuin-Cualann, from Dubhdotbra, the black man of the Dodder, to Dunlaing, the glory of the East of Ireland, and gravely chronicle the appearance in that territory of a cow with two bodies, two tails, and six legs, which yielded milk three times each day.

It was probably in memory of some of their chiefs or warriors that the inhabitants of Cualann raised the great Cromlechs, which still remain in their country as a memorial of their times. There is one in the parish of Tully, another in the parish of Killiney, and a third, surrounded by a circle of large stones, was to be found in the last century at Dalkey. A rocking-stone, which was formerly to be seen near Bullock Castle, was a contemporaneous monument, and probably the same agency placed the great stone known as "Clogh-hobber-giline," over the sacred well on Dalkey Hill. Wells reputed as holy or sacred, are believed to have been worshipped in heathen times, and we can picture the inhabitants of Cualann gathering round this well and round others which are to be found near Kill-of-the-Grange, and on Rochestown Hill, and which until recently were marked out by the rags hung on the neighbouring trees by pilgrims to their healing waters.

Along the Slighe Cualann, as the great road was called, came no doubt the heralds of Christianity to the inhabitants of Cualann. St. Patrick, when he arrived on his missionary expedition in the fifth century, is said to have landed in the Country of Cualann, near where the town of Wicklow now stands, but he only remained there a short time. He sailed thence along the coast to the North of Ireland where he disembarked, and afterwards proceeded inland to Tara. From Tara he commenced the evangelisation of the Irish people.

In the succeeding centuries men and women, inspired with holy zeal, began to devote themselves to missionary work; and in the places where they settled down, a primitive church, or *cill*, was soon erected. At Tully a number of such men established themselves, and there a group of small round houses like those already described, surrounding a little church, denoted the existence of a Celtic monastery. To the lovely Bay of Killiney came the holy daughters of Leinin, and overhanging the sea, on the side of Killiney Hill, they erected a small church. It was of simple oblong shape, built of large rough stones, with a very low doorway in the west end, and the smallest of windows in the south wall—a building, which, in the opinion of no less an authority than Dr. Petrie, is still incorporated in the nave of the existing ruins. At Kill-of-the-Grange, or Clonkeen, as that place was originally called, which St. Fintan, priest of Clonkeen, selected as the scene of his labours, and on Dalkey Island, where the Virgin St. Begneta devoted herself to a life of prayer, similar little churches arose, remains of which, in the opinion of some antiquaries, still exist. In addition to

these churches, prior to the Anglo-Norman conquest, a church dedicated to St. Mochonna was built at Monkstown, and one dedicated to St. Bridget, at Stillorgan—a name which, meaning as it does the house of Laurence, has led some persons to attribute the erection of that church to St. Laurence O'Toole,—while Kilmacud, as its name implies, was the site of the Church of Macud or Mahud.

Cualann did not escape the raids of the Norsemen, and was completely devastated by them in one of their invasions. During their occupation of Dublin, they established a settlement at Dalkey, which is the Danish form of its Irish name Deilginsi, or thorn island. Its port was, no doubt, deemed by them, as it was considered in later centuries, the safest haven near Dublin, and its island was of value as a place of refuge in the constant warfare which was waged between them and the native Irish.

More peaceful times preceded the Norman Conquest, and during them the greater portion of the lands comprised within Monkstown and the other parishes was given by the native chiefs to the Church of the Holy Trinity, commonly called Christ Church, and to the great Abbey of the Blessed Virgin Mary, which were then founded in Dublin. To Christ Church was given nearly the whole of the lands included in the parishes of Kill, Killiney, and Tully, and to St. Mary's Abbey, the lands of Carrickbrennan, which were co-extensive with the parish of Monkstown, and included the lands on which Kingstown, Bullock, and Monkstown are now built.

(To be continued.)

## NOTE A.

## CROMLECHS.

The Cromlech in the parish of Tully which is in the townland of Brennanstown, near Cabinteely, is a very fine specimen of these rock monuments, on account of its perfect condition, and the size of the roof rock, which is estimated to weigh sixty tons. The one in the parish of Killiney, which is near Shanganagh, is much smaller, and one of the supporting stones is broken. The weight of the roof rock is estimated at twelve tons. Sketches and descriptions of these Cromlechs will be found in a paper entitled "The Rock Monuments of the County Dublin," by Henry O'Neill, Esq., in the "Transactions of the Kilkenny Archaeological Society, vol. ii., p. 41; in Borlase's "Dolmens of Ireland," vol. ii., pp. 390-393; and in Wakeman's "Handbook of Irish Antiquities," ed. 1891, pp. 6870.

A curious pile of stones on Killiney Hill known as The Druids' Judgment Seat, is, thought by Mr. Wakeman to have been, in its original form, also a Cromlech. See "Handbook," p. 47, and Gaskin's "Irish Varieties," pp. 181, 192.

An account of the Cromlech at Dalkey, which was broken up when the Martello towers were built, will be found in "The Dublin Penny Journal," vol. ii., p. 308. D'Alton ("History of the County Dublin," p. 883) says it was then (1837) in existence, but must have been mistaken.

Sketches of the rocking stone and of "Clogh-hobber-giline" will be found in a collection of drawings by Gabriel Beranger preserved in the Royal Irish Academy; and for particulars about them, see Gaskin's "Irish Varieties," pp. 55, 276.

There has been much speculation as to the means by which the great roof stones of Cromlechs were raised. King Frederick VII. of Denmark suggested ("Ulster Journal of Archaeology," vol. vii., p. 314) that they were pushed up an inclined plane of earth, but Mr. Borlase shows ("Dolmens of Ireland,"

vol. ii., p. 435) how impossible this would have been, particularly in a wet climate like that of Ireland, and thinks that the stones were lifted by leverage obtained by the use of felled trees.

## NOTE B.

## RUINED CHURCHES.

The ruined church of Killiney is situated on the side of Killiney Hill, near the Railway Station. In the opinion of Dr. Petrie ("Essay on the Round Towers of Ireland," p. 170) its nave is contemporaneous with the oldest of the buildings at Glendalough. He draws particular attention to the cross which is engraved on the soffit of the doorway in its western end as a proof of its antiquity. Mr. Wakeman thinks the nave and chancel are coeval, but that the addition on the northern side of the chancel was of much later date. For description and drawings of the doorway, cross, choir, nave and addition, see paper on "Ante-Norman Churches in the County Dublin," by W. F. Wakeman, Esq., in the "Journal of the Royal Society of Antiquaries of Ireland" for 1892, p. 103, and Wakeman's "Handbook of Irish Antiquities," p. 155. Also see woodcuts of the ruins in O'Hanlon's "Lives of the Irish Saints," vol. iii., p. 197, and "The Irish Literary Gazette," vol. i., p. 169. Wakeman mentions ("Handbook," p. 212) that an ancient font was to be found in the church.

The ruined church of Kill-of-the-Grange is situated close to the modern cemetery of Dean's Grange. Mr. Wakeman considers the nave to be contemporaneous with Killiney church, and says its dimensions are similar to those of the building at Glendalough known as "St. Kevin's Kitchen." The chancel, which was connected with the nave by a rude arch, was added in the twelfth or thirteenth century when the doorway in the western end of the nave was built up and one in the southern wall opened. For drawings of the choir, arch, doorways, and window, see paper on "Primitive Churches in the County Dublin," by W. F. Wakeman, Esq., in the "Journal of the Royal Society of Antiquaries of Ireland" for 1891, p. 701, and description at p. 405. Also see woodcuts of the ruins in O'Hanlon's "Lives of the Irish Saints," vol. ii., p. 400, and "The Irish Literary Gazette," vol. iii., p. 9. There are two ancient stone crosses near the church. Sketches of them by Du Noyer are preserved in the Royal Irish Academy, and a description of them will be found in the Proceedings, vol. viii., pp. 63, 283. There are also two "bullan" holes in a rock near the church. See paper "On the Bullan or Rock Basin," by W. F. Wakeman, Esq., in the "Proceedings of the Royal Irish Academy," 3rd series, vol. i., p. 257; and also a paper by G. H. Kinahan, Esq., M.R.I.A., in the "Journal of the Royal Historical and Archaeological Association of Ireland," for 1870, p. 204.

At Dalkey there are two ruined churches, one on Dalkey Island, the other on the mainland, in the town. The former, in the opinion of Mr. Wakeman, is of Celtic origin; the latter a typical example of the churches constructed by the early English in this country. For description of the island church and drawings of its doorway and window, see Wakeman's paper on "Primitive Churches"; and for description and drawing of the town church, see his paper on "Ante-Norman Churches." A tombstone with incised concentric circles, supposed by some to be of pagan origin, has been found in the churchyard. See "Journal of the Royal Historical and Archaeological Association of Ireland" for 1870, p. 209.

The ruined church of Tully is situated not far from Cabinteely and Carrickmines. The existing remains are the ruins of a chancel, and date from Anglo-Norman times. Mr. Wakeman thinks it was probably built against a more ancient church, which formed the nave. For a drawing and description of the ruins, see Wakeman's paper on "Primitive Churches." Also see a woodcut in

O'Hanlon's "Lives of the Irish Saints," vol. ii., p. 144; and a beautiful engraving in Grose's "Antiquities of Ireland." There are two very fine crosses near this church. Drawings of them by Du Noyer are preserved in the Royal Irish Academy, and are described in the "Proceedings," vol. vii., p. 204. A tombstone, similar to the one found at Dalkey, is to be seen in the churchyard. A drawing of it by Du Noyer is preserved in the Royal Irish Academy, and it is described in the "Proceedings," vol. viii., p. 61; and vol. x., p. 340; see also the "Journal of the Royal Historical and Archaeological Association of Ireland," 1869, p. 439, and 1870, p. 209.

At Stillorgan and at Kilmacud no ruins of the original churches are to be found. Mr. Austin Cooper, F.S.A., a most acute observer, discovered in 1781 in Stillorgan Churchyard, a tombstone with markings similar to those on the tombstones found at Dalkey and Tully.

## THE HISTORY OF ST. WOLSTAN'S.

(Continued from page 53.)

## THE FAMILY OF ALEN.

SIR JOHN ALEN, or Alan, Knight Baronet, who distinguished himself at the Battle of Hastings, obtained from William the Conqueror large possessions in fee in the Counties of Norfolk, Cornwall, and Westmoreland, married Dorothy, only dau. and heiress of Sir John Budgell, of Devonshire, Knt., and had a son,

FRANCIS ALEN, who wedded Elizabeth, dau. of Sir John Brown, of the house of Montague, from whom descended,

SIR RICHARD ALEN, who m. Elizabeth, dau. of Henry Neville (lineally descended from Neville, Earl of Westmoreland), and had a son,

RICHARD ALEN, of Cotteshall, in the County of Norfolk, who m. Judith, dau. of Sir John Savage, of Rock Savage, County of Chester ("a good and faithful ally of the Earl of Richmond, and one of the brave soldiers who placed that prince upon the throne, as Henry VII."), and left two sons,

WARIN, of whom presently.

Edward, m. Catherine, dau. of Sir John St. Leger, and had, with other issue, a son, JOHN ALEN, an eminent Churchman, who became Archbishop of Dublin, and Lord Chancellor of Ireland. He was educated in the University of Oxford, and afterwards entered that of Cambridge, where he took his degree of Master of Arts. After leaving college, he was sent by William Warham, Archbishop of Canterbury, on a specific mission to Rome concerning the affairs of the Church. There he remained for nine years, and acquired the degrees of D.D. and LL.D. in Italy. On his return to England, he was chosen Chaplain to Cardinal Wolsey, Archbishop of York; and, through the influence of that powerful prelate, was appointed, in September, 1528, successor to Hugh Inge, as Archbishop of Dublin and Lord Chancellor of Ireland, which latter office he filled till 5th July, 1532, when he was superseded by George Cromer, Archbishop of Armagh and Primate of All Ireland. He was most barbarously murdered on the 25th July, 1534, in the 58th year of his age, in the house of Mr. Holywood of Artane, near Dublin, where he sought refuge on the outbreak of the Rebellion of "Silken Thomas," Earl of Kildare. (See "History of St. Thomas Court," in IRISH BUILDER for 15th October, 1898.)

Archbishop Alen, like his patron Wolsey, is said to have been "of a turbulent and daring spirit, an enemy of the Earl of Kildare, yet a man of hospitality and learning, withal, and a diligent enquirer into antiquities." His works—which are in MS., are still extant, consist of the *Liber Niger*, *sue Registrum Joannis Aleni*; and the *Reperitorium Viridi*, containing a brief account of the churches of his diocese of Dublin.

WARIN ALEN, eldest son of Richard Alen, of Cotteshall, in the County of Norfolk, m.

Ellen, dau. of —, by whom he had issue five sons and three daus., viz.:—

I. Sir John, of whom presently.

II. Thomas, of whom hereafter.

III. William, of Kildrought and Palmerston, County of Kildare. "Pardon of Sir John Alen of Alen's court [St. Wolstan's], near New Bridge, in the County of Kildare, Knight, Chancellor of Ireland; Thomas Alen of Kilheale, in the County of Kildare; and William Alen of Castleton [now Palmerston], near Kildrought, in the County of Kildare" (16th March, 4 Edward VI.). He m. Margaret, dau. of —, and had issue three sons and two daus., viz.:—

(I.) John Alen, of Palmerston, m. 1st Margaret, sister to Christopher Lynch, and, 2ndly to Mary Cams, who survived him and m. 2ndly James Jans. He d. s.p. 25th June, 1587.

(II.) Mathew Alen, of Palmerston, heir to his brother John; died 21st Nov., 1589, having m. Annabella, dau. of William Martin of Eton, in County of Bucks, by whom he had an only son, John Alen of Palmerston who m. Mary, dau. of John Luttrell of Killeagh, County Kildare, by whom (who remarried with Edward Fitzgerald of Blackhall, County Kildare) he had an only son, Matthew Alen of Palmerston, b. in 1610, and left an only dau., who d. unm.

III.) Simon Alen.

The daus. were:—

Catherine, wife of Wm. Lock, of Colmanston; and Annie, wife of Theohald Welsh, of Killencarge.

SIR JOHN ALEN, Knt., of Cotteshall, County of Norfolk, who came over to Ireland as Secretary to his cousin John, Archbishop of Dublin, through whose interest he was appointed, by patent, Clerk of the Privy Council in Ireland. On the 9th July 1533, he was made Clerk or Master of the Rolls and records of the Chancery, with the fee of £20 Irish; and Lord Chancellor of Ireland by patent, dated 1st Dec., 1586 (28 Henry VIII.). At the Dissolution of Monasteries and Religious Houses in Ireland, he had a grant of St. Wolstan's in the County of Kildare. (See IRISH BUILDER for 1st April, 1899.)

He m. Ellen, dau. of — and d. s.p. in 1561\* (will dated 23rd May, 1561; pr. by Inquisition at Kildare 1562, 4 Elizabeth) leaving his estates to his nephew, John Alen. (See below.)

THOMAS ALEN, 2nd son of Warin Alen, of Cotteshall, who also came over to Ireland with his brother, Sir John, and was appointed, 27 Henry VIII., Clerk of the Hanaper, and head Chamberlain of the Exchequer. "Appointment of Thomas Alen, son of Warin Alen, deceased, to the office of head Chamberlain of the Exchequer."—(August, 27 Hen. VIII.). On 5th August, 4 Edward VI. (1550), he was appointed Constable of Wicklow Castle, *vice* Thomas Stephens, to hold for life. On the Dissolution of Monasteries &c., he obtained a grant of the dissolved Commandry or Priory of Killhill, otherwise Kilheale, now known as Killhill, in the parish of Kill, near Naas, in the Barony of Salt, and County of Kildare. This Commandry for Knights Hospitallars was founded in the thirteenth century by Maurice Fitzgerald.

On the last day of February, 1539 (31 Henry VIII.) a conveyance was executed, by which Sir John Rawson, Knt., Prior of the Hospital of St. John of Jerusalem, at Kilmainham, near Dublin, and his brethren, granted to Thomas Alen and Mary his wife, the Lordship or preceptory of Killhill, otherwise Kilheal, in the County of Kildare, and

\* In our Article on St. Wolstan's for 1st April, the date of Sir John Alen's death is erroneously given at page 35, col. 2, par. 3, as "1554 (2 Queen Mary I.," instead of "1561 4 Queen Elizabeth." Also in same par. "his cousin, Francis Alen, brother to the Most Rev. John Alen," should have been "to his brother Francis, cousin of the Most Rev. John Alen," which errors the reader will please correct.

all castles, messuages, and lands in Cromwelleiston, near Calliaghston, Kilwarnynge, near Castlewarnynge, and the town and lordship of Kilbride, with its rights and appurtenances in the County of Dublin, and near "lez thre castles"—Johnston, Rathmore, Shirlokeston, and ye Naas, County of Kildare, because the said preceptory or lordship is situated in the marches near the "Irish enemies," the Thoiles [O'Tooles], when resistance and defence are necessarily required. To hold to the said Alen, and his wife, their heirs, &c., at ye annual rent of £5 Irish.

An Inquisition taken 9th May, 1542, (34 King Henry VIII.) finds that ye late Prior of Kilmainham (Sir John Rawson, Viscount Clontarf) was seized of this [Kilheale] Commandry, or Manor; together with court baron, court leet, and frank pledge; \* also ye town of Cromwelleiston; a ruined castle commonly called ye Court of Kilheale, 15 messuages, 30 cottages, 260 acres of arable mountain, twenty of meadow, one of under-wood, and 300 of pasture mountain in Kilheale, annual value £4; 4 messuages, 6 cottages, 140 acres arable, 20 of meadow, and 140 in pasture in Kilwarnynge; 6 acres called Kildalkie, in Kilwarnynge; out of Kildalkie James, Earl of Ormonde and Ossory, has an annual rent of 12d. payable to him, his heirs and assigns; annual value of ye said lands in Kilwarnynge and Kildalkie, 40s.; 100 acres of arable mountain, 20 of meadow, 200 of pasturable mountain in Cromwelleiston, *alias* Tyrowe, ann. val. 30s.: a messuage in Rathmore, commonly called The Parson's Glebe of Rathmore, with 4 acres of land adjacent thereto, and 10 acres of land in Edeston; 3 messuages and 3 cottages in The Naas; 11 acres of land in ye townland of The Naas; 6 acres of land in Sherlokeston, and 2 messuages in Johnston, formerly called The Parson's Glebe of Johnston; all which messuages, lands and tenements, called The Parson's Glebe of Rathmore, the half plowland, in Edeston, Johnston, The Naas and Sherlokeston, are of ye annual value of 10s.

On the 10th of June, 1542 (34 Hen. VIII.), Thomas Alen, of Kilester, obtained a lease from the Crown "of the Manor of Kilheale, Cromwelleiston, near Calleaghston, Kilwarnynge, near Castlewarnynge, and Kille-ryde, near the Three Castles, in the County of Dublin; Johnston, Rathmore, Sherlokeston, and the Naas, in the County of Kildare; all of which came to the hands of the Crown by the surrender of Sir John Rawson, Viscount of Clontarf, late Prior of the Hospital of St. John of Jerusalem. To hold for 51 years. Rent £6 13s. 4l."

"January 11th, 1 Edward VI. [1547]. Appointment of Thomas Alen to be Constable of Wyclowe Castle, *vice* Thomas Stephens. To hold for life."

"Letter of the Lord Protector of England [Somerset] to the Lord Deputy, to grant Thomas Alen a lease for twenty-one years of the parsonage of the Norragh [now the parish of Narraghmore], in the County of Kildare." (5 August, 4 Edward VII.)

Thomas Alen of Kilheel, Esq., *m.* Mary, daughter and co-heiress of Sir John Rawson, Knt., last Prior of Kilmainham (created Viscount Clontarf), *d.* in 1560f, and had issue four sons and one *dau.*, Eleanor, who *m.* Sir Thomas Dillon, of Riverstown, Co. Meath.

I. John of St. Wolstan's, his heir.

II. Thomas, of Dublin, merchant, *m.* Mary, *dau.* of Thomas Fitzgerald, Alderman, and Mayor of Dublin, 1594; and dying 6th January, 1633 (*bur.* in St. Audoen's Church, Dublin), left issue by her (who *d.* 2nd Sept., 1638, and *bur.* in St. Audoen's on the 6th of same month), two sons and four *daus.*

(I.) Matthew, Barrister-at-Law, died *s.p.* 18th May, 1636 (will dated 23th Feb., 1635-6; *pr.* — 1637), and was *bur.* in St. Audoen's Church, Dublin, on the 23rd of same month.

(II.) Laurence, who *m.* Anne, *dau.* of Christopher White, Merchant, and Alderman of Dublin.

(I) Margaret, *m.* John, son and heir of Robert Kennedy, Merchant and Alderman of Dublin.

(2) Mary *m.* Robert Fitzgerald, Esq., of Newtown, County of Meath.

(3) Bridget, a Nun.

(4) Barbara, *m.* John Sedgrave, of Dublin, gent.

III. Edward, of Kilheel, *m.* Ales, *dau.* and co heir of Giles Allen, Alderman of Dublin, High Sheriff of the City of Dublin, 1567 (and Mayor of Dublin, in 1577), by whom he had issue,

(I) John Alen, of Bishops-court, County of Kildare, *d.* 6th March, 1636, having wedded Mary, *dau.* of Theobald Walshe, Esq., of Carrickmines, Co. of Dublin (*d.* 7 March, 1637), and had issue two sons, Edward and James, both of whom *d. s.p.*, and nine *daus.*, of whom Mary wedded John, son and heir of Thomas Clarke of Dublin, Merchant; and Margaret, wife of James Sherlock of Naas, Co. Kildare. Thomas Alen, of Kilheel, was succeeded by his eldest son,

JOHN ALEN, of St. Wolstan's, who also succeeded, as heir to his uncle the Lord Chancellor, in all his estates. He *m.* Anne, eldest *dau.* of Thomas Dillon, of Riverstown, County Meath, and by her (who *d.* 1st March, 1617) had issue, four sons:—

I. Sir Thomas his heir.

II. Robert, heir to his brother, Sir Thomas (see below).

III. William, *m.* — and had issue three *daus.* and one son, JOHN ALEN, who succeeded his uncle Robert, at St. Wolstan's, and died in 1662 (will dated 9th Sept., 1640; *pr.* 2nd Feb., 1662), having *m.* Jane, *dau.* of — Wogan, of Rathcoffy (by his wife Anne, *dau.* of — Hussey, Esq.), and one *dau.*, Anne, who *m.* — Gibbon; and three sons—Thomas, William, and Robert, all of whom *d. s.p.*

IV. Nicholas, heir to his brother, Sir THOMAS ALEN, Bart., and eventually heir to his nephew, JOHN ALEN, of whom hereafter, and who died 29th Sept., 1616. He was succeeded by his eldest son,

SIR THOMAS ALEN, Knt. and BARR., so created, 16th February, 1621, the patent setting forth that "the honour was conferred by King James I. in consideration of the great services rendered to the State by Archbishop Alen." Sir Thomas *m.* (1st) Mary, *dau.* of William Fleming, 16th Baron of Slane, and sister of Christopher, 17th Baron of Slane, but by her (who *d.* 13th November, 1622, and *bur.* at Donagheumper) he had no issue. He *m.* (2ndly) Mary, eldest *dau.* of Jenico (Preston), 5th Viscount Gormanstown (marriage deed dated 13th December, 1624), and *d. s.p.* 8th March, 1626-7 (will dated 1st March, 1626-7; *pr.* 18th April, 1627); *bur.* at Dunagheumper, when the title became extinct; but his estates eventually centered in his younger brother, NICHOLAS. His widow *m.* (2ndly) Simon Luttrell, of Luttrellstown, County Dublin, to whom she carried the greater portion of her first husband's estates, including the town of Leixlip.

ROBERT ALEN, of St. Wolstan's, heir to his brother, Sir Thomas, in whose will he is named, *m.* Jane, *dau.* of John Sarsfield, of Lucan, County Dublin (by his wife Margaret, *dau.* of Sir Luke Dillon, Knt., but dying *s.p.* ante 23rd October, 1611, he was succeeded by his nephew, John Alen, who *d.* in 1662, and leaving no surviving male issue, the estates passed to his uncle Nicholas.

(To be continued.)

#### ENGLISH V. AMERICAN ENGINEERS.

In the House of Commons, on Tuesday, Lord George Hamilton informed Sir Alfred Hickman that the order for the Gokiek Viaduct was not given by the Government of

India, who had nothing to do with it, but by the Burma Railway Company. The company invited five English and two American firms to tender. Out of the five English firms, four declined to tender, and one English and two American tenders were sent in. The most favourable English tender required three years for the work, at a cost of £116,000. The most favourable American tender required about one year for the completion of the work, at a cost of £60,000. Under these circumstances, the company, with the concurrence of the Government director, accepted the American tender. The Indian railway companies gave preference in all these contracts to English makers, but he was sorry to say that this was not the first contract in which there had been a marked difference both in price and time of delivery between British and American tenders.

#### THE ROYAL IRISH ACADEMY.

At a general meeting of the Academy on Monday last,

Lord WALTER FITZGERALD presided, and the chair was subsequently taken by Mr. Williamson, F.T.C.

Dr. T. Johnson, F.L.S., and H. Hanna, M.A., B.Sc., communicated a paper entitled "The Irish Phaeophyceæ," in which the authors gave an account of the examination of collections of brown seaweeds from nearly all parts of the Irish coast, made since 1891. The paper contains a list of some forty species to be added to the seventy species previously known. The authors expressed their indebtedness for help to the Misses R. Henaman and M. C. Knowles, and stated that they had examined collections of seaweeds made in the first half of this century by Drs. W. H. Harvey and D. Moore; W. Thompson, McCalla, I. Carroll, and Miss A. Ball. There were several samples of kelp, made by burning oarweed, shown, and a specimen of oarweed prepared in Norway, and described as an improvement on oil-silk. In introducing the paper, Professor Johnson expressed the hope that the Academy would encourage its Fauna and Flora Committee to devote attention to the life histories of the seaweeds, as both biologically and economically of great importance.

The paper was referred to Council for publication.

Mr. A. R. Nichols, B.A., communicated "A List of the Marine Mollusca of Ireland," containing 546 species, being 87 per cent. of all the species found on British and Irish coasts. These had been found in depths of from 100 to 1,000 fathoms.

Mr. C. J. Joly, F.T.C., read a paper entitled "A Note on Astatics."

The paper was referred to Council for publication.

Mr. J. G. Smyly, F.T.C., read a paper on "Certain Curves connected with the double Normals of plane Bicircular Quartics and Cycloides."

Mr. Robert Cochrane, F.S.A., was elected a member of Council, in the room of the late Dr. Frazier.

Mr. Grenville Cole was elected librarian.

Professor Atkinson was elected representative of the Academy on the Board of Visitors of the Science and Art Museum.

#### NOTES OF WORKS.

A new branch of the National Bank has been erected on Rathmines-road, on the site of former offices. It consists of two storeys; the ground floor is occupied by the public office and the fire-proof safe room. The floor of the public office is of mosaic work. The walls and ceilings are elaborately frescoed, the desks and counters are of mahogany, with richly carved ornamentation. The doors are of oak, with solid brass mountings, while over the entrance the arms of the National Bank—the Irish wolf dog and harp—are carved out of a solid block of red granite. The architect was Mr. F. A. Butler, and Mr. Sharpe the contractor.

\* Frank Pledge: A pledge or surety given by the Saxon tythings for the good behaviour of freemen.

## THE LESSER CASTLES OF THE CO. DUBLIN.

FORTY-EIGHTH ARTICLE.

By E. R. McC. Dix, M.R.S.A.I.

KENURE (OR KINNURE) CASTLE.

THIS Castle is situated in the north-east portion of Sir Roger Palmer's demesne, inside the wall which bounds the demesne and separates it from the road leading from the town of Rush to Skerries.

The Castle, which is built into a large bank of earth along the side of a pond, is built of stone, but with some internal brick-work. Its highest point at present is about 35 ft. from the ground level. The roof is gone, and the only walls remaining nearly perfect are the south, the east, and part of the west; the rest have fallen away, or were probably taken away to help to build the demesne wall which runs alongside.

The existing remains of the Castle consist of a square tower with a wing on the left side. This Tower is built rather strongly, particularly near the ground. It measures outside, from east to west, 19 ft. 4 in., and from north to south, 16 ft. 2 in. There are two windows, or openings, in the south wall—one to the left near the top, hidden externally with ivy, which is very abundant; and the other in the centre of the wall. This latter, which measures internally 7 ft. high and 3 ft. 5 in. broad, may have been a door, as the bottom of it is exactly on the level of the first floor. In the outside of the south wall at the base there is an archway, or alcove, measuring 4 ft. 9 in. in height, 8 ft. 2 in. in breadth, and 4 ft. 2 in. deep, into the wall. Behind this archway there is certainly a cellar, but there is no way now of gaining an entrance. The ground under the arch has a very hollow sound. The wall which forms the back of the archway has an opening not quite through the wall which measures 1 ft. 3 in. long, 3 in. high and 10 in. deep, and it has also a number of small round holes in different places through the wall.

The east wall measures 16 ft. 2 in., and has no windows visible, but on clambering up to the top of the bank on this side, one finds the remains of a doorway which leads into the first landing. Entering by it, the room here is found to measure 15 ft. by 15 ft. The north and west walls are gone, and also the roof, as before mentioned. One can look out over the demesne wall across the country to the sea from this room. There is not much to be seen in it when examined, except the remains of a slab or stone in the south-east corner, which was probably a seat or rest of some sort. In the south wall of the room is the window (or doorway) already described, and in the south-west corner is a stone-work, like a chimney-breast, running up about 10 ft. from the floor, and measuring 4 ft. by 4 ft. On the top of this is a smaller one like a watch-tower or turret, with a window looking south; this is the one hidden by ivy outside. Inside this turret, on either side, is a recess capable of holding a man; unfortunately there is no way now of climbing up any higher, and anything else of interest that might be there, is concealed by ivy.

To the west of this room, on almost the same level, are the remains of the left wing of the Castle, measuring 15 ft. 8 in. long, by 10 ft. 6 in. broad. As in the case of the Castle, the north wall and roof are gone.

The south wall of this wing has two narrow windows, and at the north-west corner can be plainly seen the remains of a doorway, which leads in from the west. Outside this doorway projects a small wall 2 ft. 2 in. long and 5 ft. high—probably a protection for the door.

In the north-east of Kenure Park, to the west of the church, and near the gate-lodge, are also the remains (now very scanty) of what apparently was once a substantial building. It consists practically of the basement of a tower extending in its greatest length from north to south, and having an entrance by doorways on the ground level from the north-east and south-west corners.

Entering from the north-east corner by a doorway 2 ft. broad and 5 ft. high, one finds a porch measuring 4 ft. 8 in. from north to south, and 6 ft. 8 in. from east to west. This porch has a spiral roof of stone and a window 2 ft. 3 in. high and 2 ft. 6 in. broad, which runs out through the north wall, diminishing as it goes through; and at the west end of this porch is a door measuring 5 ft. 6 in. high and 2 ft. broad, leading into a large room, the roof or ceiling of which is arched. This chamber measures 23 ft. 7 in. long and 15 ft. 10 in. broad. It is about 15 ft. high. This room is on the ground level.

In the centre of the north wall of this room there is a window 4 ft. high and 4 ft. 10 in. broad. On each side of this window there is a recess in the wall measuring 1 ft. 6 in. every way.

The west wall has no windows, but at the south-west corner there is a stone-arched doorway, which probably led up the stairs to the floor above; it measures 3 ft. broad by 5 ft. high. On the left of this doorway there is a small window partly broken away.

The south wall has a window or doorway measuring inside 5 ft. broad and 7 ft. high. This window or doorway is square at the top, and diminishes as it runs through the wall. To the left of this doorway or window in the wall there is a recess 23 in. by 23 in. and 1 ft. 8 in. deep.

The east wall has no windows, but in the centre of the wall there are the remains of a fireplace, and a chimney runs up through the wall.

Passing out by the door at the south-west corner, one can see traces of a stone staircase, which led up to the upper part of the building. Outside this doorway, built up to the corner, is a piece of stone-work now almost broken away, but this undoubtedly formed the corner of the stair turret.

By climbing up at this corner, one can get upon the roof of the chamber, which is overgrown with ivy, weeds, &c., clay having been thrown on it some years ago for some purpose. There are now no walls higher than this roof or floor, which is only 20 ft. above the ground, and nothing of note can be observed on top, but doubtless there was originally a chamber here also.

Up till quite recently this building was inhabited by an old man. It is hard to say now what this building was originally. It may have been a gate-tower.

There is only a bare allusion to this Castle by D'Alton in his "History of the County Dublin;" and it is little known, I think. I am indebted to Mr. Thomas Richardson, of St. Douglough's, for the foregoing description of it, for which he specially visited the place and examined it with great care. He found

the gate-keeper at the lodge very obliging and courteous, and ready to admit any antiquarian student to inspect the Castle. When, several years ago, I walked through the demesne, I examined the old church and the lesser Tower, but entirely missed the Castle itself.

## THE VENTILATION OF SEWERS.

At a meeting of the Royal Institute of the Architects of Ireland, on Thursday evening, Sir Charles Cameron, C.B., Medical Officer of Health for Dublin, read a paper on "The Ventilation of Sewers." He described the system which prevails in Dublin and most towns, by having openings into street sewers which permit the air from the sewers to enter a chamber and to pass from the latter into the open atmosphere. Constant complaints were made as to noxious effluvia coming out of the sewer ventilators. By the use of the ventilators it was supposed that two objects were gained—namely, the ventilation of the sewer and the prevention of air pressure in it which might overcome the traps on the drains from the houses into the sewer. Sir Charles Cameron said that his experiments showed that the air in sewers rarely had a pressure above that of the general atmosphere, and when pressure did occur it was owing to wind blowing into the sewers through the ventilating openings. He described the experiments which, by aid of anemometers, he had made regarding pressure in the Dublin sewers. He found that the pressure was no greater than that of the atmosphere. He found, however, that in the early morning air was often drawn into the sewers through the ventilators, because the air was drawn into houses through untrapped cross drains, or drains with defective traps. Sir Charles then exhibited his new sewer diffusion ventilator, which he suggested should replace the open ventilator. It consists of four or six cylinders made of a mixture of plaster of Paris and clay, which is very porous, and allows readily the passage of gases, but not of solid matter, including bacteria and such-like organics. The use of this form of ventilator prevented rushes of offensive effluvia from sewer openings, and it prevented the possibility of pressure in the sewers. This was demonstrated by an experiment in which gases were diffused readily through the porous cylinders. Sir Charles said that the City Engineer was now using the new diffusing apparatus, and approved of it.

## AMALGAMATED SOCIETY OF CARPENTERS AND JOINERS.

THE 39th annual report of the Amalgamated Society of Carpenters and Joiners states that the year's receipts from all quarters was £142,766, an increase on the previous year of £5,528. The total disbursements were £106,362, less than those of the previous year by £523, and £36,404 have been added to the cash balance. For the support of unemployed members £13,462 was paid for this purpose during the past twenty years. A remarkable feature, however, is the amount expended in meeting claims for disablement. This was £4,500, an increase of £2,150 on the previous year. "This," the secretary says, "occurring during the very year that ushered in the new Compensation Act, goes far to prove that in these go-ahead times, when every department of labour is carried on at high pressure, a money penalty does not diminish the number of accidents or induce employers to make a more careful study of how best to prevent them occurring, as defective machinery and plant are the most fruitful source from which all this mutilation of limbs occurs." £4,963 has been spent in "trade privileges," £2,502 in replacing tools, £214 in travelling expenses of unemployed members, £29,938 in sick benefit, £14,633 on superannuation benefit, £5,788 on funeral benefit, and £2,346 on benevolent grants.

## SPECIFICATIONS.\*

THERE has been so much recently written upon the subject of Specifications that it is difficult to suggest any new or original ideas, and I fear that the few remarks I have to make may be somewhat wearisome to many present, and seem like going over old ground. But those who have not given the subject any special consideration may find some of the suggestions not wholly unprofitable. And if further excuse is necessary, I do think that to hear a question discussed creates a more lasting impression than that of mere reading.

A Specification may be either lengthy or curtailed, according to the particulars given upon the drawings. Some engineers favour a short Specification, and prefer to put as much written information as possible upon the drawings, one reason for this being that engineers usually supply a number of detail drawings with their contract plans, which enable them to put many notes upon those drawings. On the other hand, architects do not usually supply many detail drawings, consequently somewhat lengthy Specifications are necessary. To my mind, either method may be adopted if the requisite information be clearly given. I can conceive of a set of plans prepared and written up so fully in detail that a Specification as a separate document might become necessary; this sometimes happens in a certain class of work. On the other hand, I can scarcely imagine a Specification so full in detail as to dispense altogether with the plans, unless it related to a very small and simple erection or to general repairs or decorations. But without further discussing these two methods I would ask you to assume that both plans and the Specification are necessary for general work; I will then suggest a form of Specification which shall be curtailed and yet shall not detract from a full and clear description of all parts of the work.

A Specification should not supersede the particulars given upon the drawings, but should more fully explain those parts which the drawings do not clearly illustrate, or which are in any way obscure. It is impossible to show every detail or give every particular upon the drawings, consequently a full description of these parts becomes absolutely essential in the Specification. I take it that the plans give the general arrangement of the building, and the Specification should describe the details of that arrangement. The plans should have figured upon them every important dimension, such as the lengths, widths, and heights of the various distinct parts of the building; the thickness of walls; the depth and width of the concrete foundations; the sizes of floor joists, roof, and flat timbers; the widths and heights of doors and windows; and all other similar and important parts and items. It is seldom that plans to a small scale are so accurately drawn as not sometimes to be obscure with regard to the sizes of certain parts unless these parts are given in figures.

The only other particulars in writing to be put on the plans would be the names of the rooms and other parts of the building, together with any notes or references which might assist the description in the Specification. With regard to small scale drawings, do not labour the elevations by showing every brick and slate. Working drawings will be far clearer without too many lines, and there is no need to finish them like a picture. But in the Specification I would include everything except the general dimensions of the various parts of the building. Of course, the sizes of the joists and roof-timbers are always described in the Specification, as well as sometimes being given on the plans; and I see no harm in stating the thickness of the various walls, the depth and width of the concrete under the walls, or any other detail of the building. A Specification which is full, but at the same time concise and to the point, will prevent

mistakes and misunderstandings when the building is in progress. Need I remark that the Specification should always agree with the drawings?

Presuming, then, that the plans are before you, but not in too great detail, and that you have decided to write a rather full Specification—what, then, is the first consideration? You must have a complete knowledge of your subject—that is, a full grasp of the details of building construction and of the value and properties of materials. In other words, you must know what you want to describe, and, knowing that, you must be acquainted with the requirements attendant upon those wants; and you may take it for granted that until you are proficient in these matters you will never be able to commit to writing the proper descriptions needful to the erection of a building. Therefore, I say that a complete knowledge of all the requirements and details of the various trades coming within the scope of the architectural profession is the first consideration to efficient Specification writing; and I might also add a knowledge of the various Acts relating to buildings. But it may be said that it is impossible to know everything, and when in doubt the only way is to put a provisional amount to cover any such point, and to obtain afterwards the information from a friend or specialist. This is true, and may be the only course to adopt at the time, but ready and accurate knowledge will benefit all parties concerned.

The question then arises: What is the best way to obtain knowledge? I know of only two ways—study and observation. What I do myself is first to read any works obtainable which bear upon any doubtful point, and I would also add that much useful information can sometimes be gained from trade catalogues. I then discuss the matter on every possible occasion with any one I come across who has any knowledge of the subject, and, further, I keep my eyes open and learn all I can from what is going on around me. You have only to pass down any street where building operations are in progress, to gain many practical hints.

You now proceed to write the draft Specification. This is often hurriedly written, much being left to alter and supplement when revising for fair copying. This is a great mistake. A draft Specification should be written with care and thought. Being fresh to the matter, even so dry a subject creates a certain amount of interest, and if you concentrate your mind upon the subject you will be less liable to omit many small items. Therefore, let the first draft be as complete as possible. I might suggest that when engaged upon the plans, it will be found of great assistance if notes are made of any obscure item coming under your observation at that time. Just a reminder here—when sending out a number of fair copies, see that they all agree.

There is one matter which I should perhaps have referred to sooner. Should the quantity surveyor write the Specification for the architect? In the abstract it seems absurd to ask such a question were not this practice so frequently followed. Personally, I think the architect should write his own Specification, and not delegate the work to another. A quantity surveyor cannot know what is in the architect's mind, therefore it is impossible for him to describe fairly that which embodies the architect's best ideas. It is unjust to the quantity surveyor to ask him to attempt to do so. It is also unjust to the client, and the architect has no right to accept payment for work done by another. One other word with reference to the quantity surveyor. When he takes out the quantities it is usual for him to make notes of any omitted items on the architect's Specification. Should he not do so, however, the architect must run through the bills of quantities and adjust the Specification to them before the contract is signed.

Reverting to the subject-matter, a full Specification will save many an anxious moment. Constant disputes occur with the

builder, many extras crop up owing to imperfect wording and omissions—ordinary care would prevent all this. And remember always that a Specification is a legal document.

Bearing somewhat on this incomplete description of work, attention might be called to the fact that one so often sees in a Specification wording to this effect:—"That the builder is required to perform a certain work all complete," or "all as required," or "as necessary." This generalising shows the architect's ignorance of what is required; and it is not reasonable to ask a man to estimate for something of which you yourself do not know the requirements. Consequently you either get an unfair estimate or an incomplete work, or else a squabble ensues with the builder as to what was intended or required. Should you ever be in this difficulty of not knowing what is necessary, then the best plan is to put a provisional amount, and let the item work itself out in execution. Therefore let your terms be definite and clear. Some make a great point as to which is the correct word to use, "provide" or "supply." I think it is very unimportant. There certainly is a slight difference; but, at the same time, to provide you must supply, and to supply you must provide.

Agreeing, then, upon this point that a Specification must be somewhat full, and, consequently, lengthy, what then is the best way to curtail the descriptions without detracting from the merits of the document? There are several ways. Many items which will apply to several parts of the building under similar conditions may be generalised. Thus, take, for example, the skirtings to a building. A general clause applicable to all skirtings may be inserted, somewhat to this effect: All skirtings to be rebated to floors, tongued and mitred at angles, tongued at heading joints, housed into architraves, returned and mitred at ends, and fixed to double splayed narrow-framed grounds with dovetailed backings and filling out blocks, and plugged to walls. The only further description then necessary will be to refer to each particular skirting, such as:—

Attic skirtings 7 in. by 1 in. in plain deal.

First-floor skirtings 9 in. by 1½ in. moulded deal.

And so on.

Here, then, the description of the fixings to each separate class of skirtings is avoided. In the same way the backings to door and window linings, and many other items where the conditions are similar, may be generalised. Further, if any detail drawings are supplied with the contract plans, which I fear is not often the case, a Specification may be much shortened without detracting from its efficiency by merely referring to the detail drawings in question, and at the same time mentioning any particular feature not readily gathered from those drawings. Thus, in about three lines, may be stated all that is necessary, which otherwise would perhaps occupy a dozen or twenty. But I fear, until it is the custom to supply detail drawings with the contract plans, very much cannot be made of this point.

Here is another way to shorten a Specification. Take, for example, the windows to a building, one or two of which are dissimilar from the rest. I would first describe those, and then refer to all the others on all floors, in all positions, in the one item, and not describe them to each floor separately. Take, again, the external facings to brickwork. Describe any special facing first, and then the whole of the other facings to all parts in the one item without reference to special position. There are many other items which may be treated in this manner. One more suggestion. The wording itself of a Specification may be much curtailed by care and practice. You will never be able to write concisely and to the point until you have written many Specifications. Do not labour the wording needlessly nor repeat yourself unnecessarily. In time the requisite language will come simply and quickly. I want it to be understood that my remarks chiefly apply

\* By Mr. F. W. Macey. Read at Architectural Association, London.

to the correct form and wording of a Specification of which quantities do not form a part of the contract, or which, perhaps, have not even been supplied.

Another important point in a Specification is, that it should be readily understood, and clear. To avoid confusion, tabulate as much as possible the various parts of a complete item of work by placing each separate particular part under the preceding one. It will take more paper, but then that is always a good fault, for it will make the description clear at a glance. The form of tabulation I would suggest is as follows, which illustrates the description of a roof formed with trusses. The roof to be formed of, say, six whole trusses and two half trusses, each to be placed 10 ft. apart, and composed of the following scantlings, and the whole notched, framed, spiked, and strapped together: tie beams 12 in. by 6 in., resting on 2 ft. 6 in. by 12 in. by 3 in. tooled York timbers.

King posts out of 6 in. by 5 in.

Principal rafters 6 in. by 4 in.

Struts .... 4½ in. by 4 in.

and so on. Here it will be noticed that each separate component part of the roof is placed immediately under the preceding one until all the items have been described. Thus, at a moment, the sizes and particulars of any one special part of the roof may be seen. This form of tabulation will be found much clearer than the method which is so often adopted of running on the particulars of the various items line after line without a break. In the same way may be tabulated the descriptions of floors, windows, doors, and many other distinct items severally composed of many parts.

(To be continued.)

#### NOTES FROM BELFAST.

ALTHOUGH trade is quiet at the moment, a very healthy tone prevails all round. During the past couple of years the erection of small and even moderate-sized houses was pushed to an extent altogether out of proportion to either the existing population or any probable increase in the immediate future, and at the end of last year it was calculated that there were 10,000 of such houses lying vacant. The failures amongst builders of such a class of property were consequently unusually numerous, but it is believed that the atmosphere has now being cleared to an almost thorough extent, and that for a long time to come there will not exist the same pressure of sales and cheapness of credit which chiefly brought about the crisis. Contracts for large buildings are at present more numerous than they have been for many years past, and it is believed that the present year will establish a record in this respect. The slate trade, although dull, is showing signs of improvement, and prices are fairly steady. Owing to the Welsh quarry owners having reduced their prices in order to meet the competition from America, importations from the latter have largely fallen off of late, and it is to be hoped that the same liberal policy will be continued throughout the year.—*Timber Trades Journal.*

#### THE MUCKROSS ESTATE.

THE sale, by private treaty, is announced of the far-famed Muckross Estate, including Muckross House Demesne (which entirely surrounds the middle Lake of Killarney), deer forests, game preserves, fisheries, lakes, mountains, and islands, containing altogether over 13,000 acres. The tenure is fee-simple save as to 227 acres, which are held for ever subject to a head rent. In the sale will be included Muckross Abbey, Torc Waterfall, the Devil's Punchbowl (part of), O'Sullivan's Cascade, Brinish Island, Bricken Island, Lord Brandon's Cottage, Mangerton Mountain (part of), Torc Mountain, Tomies Mountain, the Purple Mountain (part of), the Old Weir Bridge (part of), the Meeting of the Waters, &c., in fact the finest portion of the scenery of Killarney. The deer forests are the best in Ireland, and the cock coverts are probably the same.

#### MISCELLANEOUS.

**NEW DISCOVERIES AT BRISTOL CATHEDRAL.**—For some little time past, considerable alterations have been made in the neighbourhood of the Cathedral at Bristol, which was formerly the church of the Abbey of St. Augustine. Chief among these alterations has been the making of a new road on the south of the site of the abbey buildings, and the consequent opening-up of views of the monastery hitherto unobtainable. The plan of the Cathedral and the cloister court has already been given in the *Builder* Cathedral Series; and the cloister with the buildings on its east side were there shown. Both on the south and west are other buildings, into which remains of the monastic buildings have been incorporated. They consist chiefly of the frater on the south and the soanty remains of a long building, possibly the cellarer's building on the west. This however, has been much mutilated, and only in the walls of the present deanery, near the south-west angle of the cloister, are remains to be seen. The deanery itself apparently is of very early work, and at the south end is an open courtyard approached by a passage from Lower College Green. At both ends of this passage are fine Norman doorways, the western one semi-circular with a later insertion of late fifteenth century date, the eastern one of curious segmental form, perhaps rebuilt with old materials. The passage is 25 ft. long and 14 ft. wide, and is certainly original work of the Norman period. The courtyard is 30 ft. long and about 15 ft. wide. The walls were formerly covered with plaster and rough-cast. This has been removed, and some very interesting details have come to light. The north side is formed by the south wall of the deanery, and near its western end over a simple string-course, Norman arcades have been discovered, one altered in sixteenth century times. Traces of a Norman window are also visible near the north-east angle over a more modern square-headed doorway. The masonry for a few feet above the Norman windows is original; above this is some work of Perpendicular date with several windows of varying size, and the remains of a low pitched parapet and gable. Both the south and east walls of the courtyard appear to be early work with later windows inserted, and in the east wall is a curious straight-sided arch leading to a passage formerly communicating with the kitchen, frater and lesser cloister. The head of the doorway bears the rebus of Abbot Nailheart (1481-1515), and this rebus with the arms of the Berkeley's also occurs on the western door of the passage.—*Builder.*

**LEGACIES TO LITERATURE.**—The British Museum and various institutions in Bristol and elsewhere will benefit materially under the will of the late Mr. Vincent Stuckey Lean, of the Windham Club and of the Middle Temple, whose personal estate has been valued at £414,786 5s. 6d. He bequeathed £50,000 to the trustees of the British Museum, to be appropriated to the improvement and extension of the library and reading-room. The trustees are also to be offered his manuscripts and books annotated in manuscript relating to the subjects of national proverbs, English and foreign, to form part of the national collection. Another sum of £50,000 is to be applied to the further development of the free libraries of the city of Bristol, and with especial regard to the promotion and sustenance of a general reference library of a standard and scientific character for public use in that city. Mr. Lean requested also that the trustees of the British Museum and the Municipal Council of Bristol would consider favourably the question of keeping open the libraries and collections under their charge during some part, at least, of each Sunday throughout the year, but this request is in nowise to be regarded as a condition of the bequests.—*British Printer.*

**WIRELESS TELEGRAPHY.**—The wireless telegraphy installation for the Dieppe and Newhaven service is to be proceeded with at once, and in addition to that on either side of the Channel the apparatus will be set up in the Channel steamers, the service being the first to adopt the system. If it should enable steamers to steer a bee-line in a fog by finding their bearings, as Signor Marconi's representative on Thursday stated that it will, the value of the system will be incalculable for all passenger steamers, and particularly to those crossing the Channel. The distance between Dieppe and Newhaven is 75 statute miles, as against 30 miles where the present cross-Channel experiments are taking place. The French Commission, who have been experimenting in a cruiser under steam in the Channel, suspended operations on Thursday for a fortnight, in order to prepare a report on the subject for presentation to the French Government. The experiments have been completely successful.

#### HISTORY OF

### Dublin Hospitals & Infirmarys,

FROM 1188 TILL THE PRESENT TIME.

—O—

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# The Irish Builder

A JOURNAL DEVOTED TO

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[1st & 15th of the Month.]

[Estab. Jan. 1859.]

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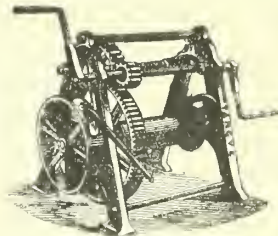
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**Congress in Blackpool of  
THE ROYAL INSTITUTE OF PUBLIC HEALTH,  
SEPTEMBER 21st to SEPTEMBER 26th, 1899.**

THE Society of Architects will be represented at the above by Messrs. Ellis Marsland (*Hon. Sec.*) and C. McArthur Butler (*Sec.*), who have been appointed by the Council as delegates. Arrangements have been made for discussions on various subjects with a view to formulating the opinions thereon, and recording and publishing the same for the guidance and information of those interested in the many movements for the benefit of the community.

Opportunity will be taken of this to introduce the question of "The Statutory Registration of Architects," probably by a paper on the subject, introductive to a discussion. Members and others desirous and willing to take part in the discussion should send their names to the Society of Architects at the earliest possible date.

Full details will be published in due course.

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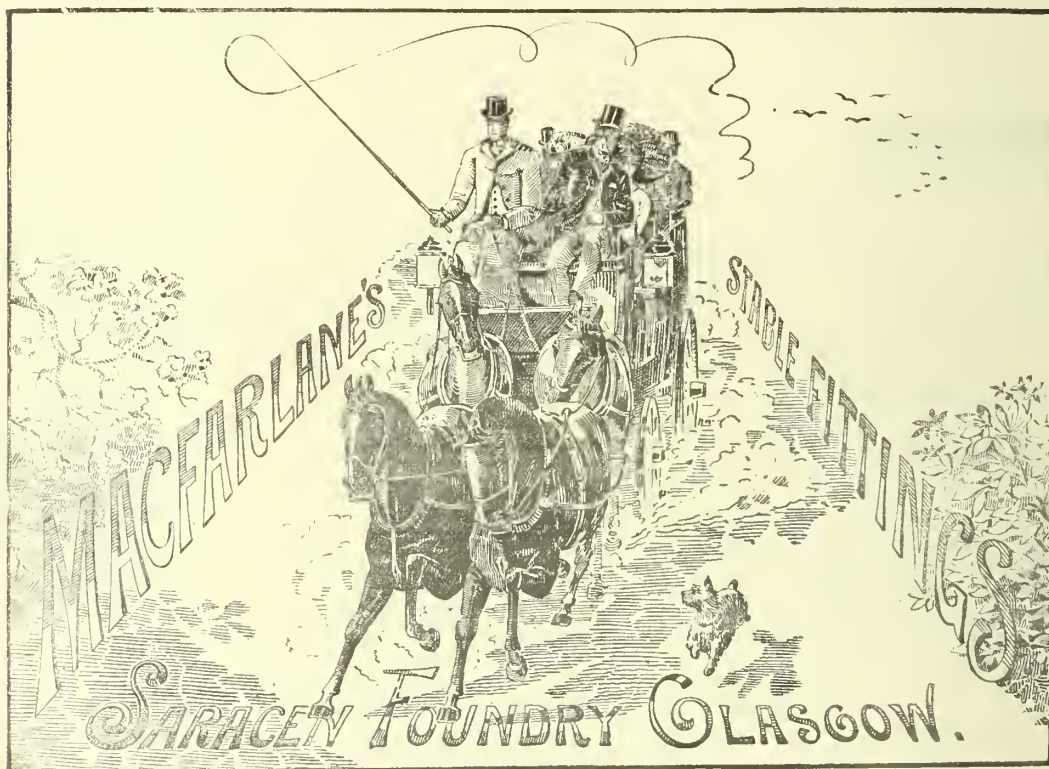


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## THE IRISH BUILDER.

VOL. XLI.—No. 946.

## TO OUR READERS.

## THE IRISH BUILDER.

IN this current number we have the pleasure to announce to our readers that we are shortly about to begin a new issue of this Journal in an enlarged and greatly improved form.

The IRISH BUILDER has now had an existence of close upon half a century, and throughout that long period it has enjoyed the support of the Architectural profession, the Building trade, and the kindred and allied callings. During this long and eventful time we have endeavoured to keep our readers informed of the various matters of interest connected with Building that have occurred in Ireland and elsewhere. Doubtless the paper has had its shortcomings, but one of the chief aims that its conductors have consistently kept before them has been to preserve a tone of independent and kindly criticism of all that concerned the Art of Building. The paper has seen many changes and innovations in the sciences and arts that pertain to Building. It has before now changed hands, and experienced altered conditions; and now, at this stage, it has again come under new management. We have to thank our readers for their long support of the Journal and their interest in it.

Under the new management the IRISH BUILDER will continue, as heretofore, the exponent of the interests of the Architectural and Engineering professions and the Building trades. But new times mean changed conditions, and in our new issue we hope to prove ourselves fully up-to-date. Our effort shall be to offer to our readers, at a moderate price, a journal of a broad character, embracing not merely Building, but, in the widest sense, the kindred and allied arts and crafts—the fine arts generally, electric lighting, the antiquities of Ireland, native industries, etc. In short, a brightly-written, well-illustrated, technical, and art journal. Our aim will further be to provide the

latest news as to contracts, open and decided; to keep our readers in touch with London, the centre of scientific and artistic energy. To this end we have secured the co-operation of a gentleman, a member of the Architectural profession, resident in London, well qualified to do his part, who will act as a regular London correspondent and representative in England.

With the great change now taking place in the political, social, and industrial conditions of the country, we deem the moment opportune for our project.

At the time when this Journal was started, we were still in the early days of the Victorian reign, with all the deterioration of art and craft for which the period was so badly pre-eminent. The Gothic revival was yet to rise and fall;

eight years later it passed into Mr. Roe's hands. Advancing years have compelled Mr. Roe to sever his active connection with the Journal, but the present management are assured of his continued interest and support of the paper with which he has been so long and so honourably connected.

We think that the accompanying portrait, from a photograph specially taken by Messrs. Chancellor, cannot fail to be of interest to our readers.

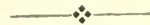
We look to them for a continued and increased interest and support, and we promise, on our part, to leave nothing undone to provide an up-to-date, well printed and illustrated paper, far-reaching in its aims, and devoted to their interests. We shall have to ask their indulgence at first, but we fully anticipate redeeming our promises in due time.

The student will find us desirous of affording him every help and encouragement in our power. We, ourselves, have been promised the support of many gentlemen of eminence in the profession. Our local Institutes of Architecture and Engineering, and the Architectural Association shall have our best attention. The proceedings of the County Councils, Coporate and Trade Bodies, will likewise be found reported from time to time.

The IRISH BUILDER will be continued in its present form for some time, the changes and improvements we allude to cannot be carried out in a day, but in subsequent issues we hope to place our readers more fully in possession of our plans.

We may add that it is our

intention to shortly introduce a series of illustrated articles dealing with the work of leading Irish and British Architects.



WE have before us the current monthly issue of the Proceedings of the Royal Institute of British Architects. We note with pleasure the singularly able paper of Mr. Bailey, Architect to the London School Board, recently read before the members of the Institute. The paper is one of a class which we would gladly see more frequently. The article is on the interesting subject of the modern development of school planning, and is well illustrated. The amount of information conveyed within the compass of a short lecture is very great



MR. PETER ROE.

the first great International exhibition was scarce thought of; electricity was a closed book as far as its practical utility was concerned, and the railroads were, after all, but in their infancy. If our readers will consider these things, they will readily estimate the vast changes which the years have brought about.

During the past forty years the paper has been owned and edited by Mr. Peter Roe, whose tact, unvarying courtesy, and ripe judgment, have enabled him to safely pilot it through the long term of years—a record of which we venture to say he has no cause to be ashamed. Few technical journals or magazines can boast of so lengthy an existence. Originally established in 1850, by Mr. Lyons, an architect well known in his day, some

indeed, and the subject is dealt with in a thoroughly practical fashion.

It seems astounding that the progress of modern school planning in recent years has been to Irish architects almost as a closed book so far as adopting new ideas is concerned. Of course this is not entirely, or even chiefly, the fault of the architects. They have to contend with the deep-rooted conservatism of Irish school managers, who apparently cling, with a desperate obstinacy, to old traditions. Again, they have to reckon with the slow moving and antiquated procedure in this country of the various public departments, whose wishes they have to meet, as many an Irish architect knows to his cost.

And when Mr. Bailey tells us that the cost of school building and proper equipment in London is as much as £15 odd per scholar, derived from the public school rate, and when we compare this with the paltry £3 10s. 0d. per head of State aid in Ireland, we begin to see, if not the solution of the riddle, at least a partial explanation of the apparent incongruity. To say the least it does seem like "another injustice to Ireland." True, we cannot lose sight of the fact that the one sum is derived from a local rate, administered by an elective body, while the other is a Treasury grant, but that does not make the results any the happier, or the reflection any sweeter. It is melancholy to think that the classroom system was in full swing in England so far back as the early seventies, while abroad the Prussian State Schools were far in advance of England, and yet to-day in Ireland its incontrovertible merits have scarcely been heard of, not to say put in practice. That the Irish elementary schools have achieved even such results as they have is a fine tribute to the personal industry and capability of the managers and teachers alike.

As far as we can hear there is little prospect of an early settlement of the strike amongst the Dublin painters. Masters and men appear equally indisposed to yield.

MR. W. KAYE-PARRY, M.A., has reported on the sanitary condition of the Rathdown Workhouse. He has formulated a scheme of drainage, the cost of which is approximated at £1,000. The guardians have the report under consideration. Without desiring to advocate lavish expenditure of the rates, we trust no cheeper policy will be adopted on so vital a question.

WE congratulate our go-ahead contemporary, *The Builder's Journal*, on the appreciation with which the competition for designs for a country house appears to have met with. Albeit it seems to bespeak a decided glut in the "Architecture market."

CLONAKENNY CHURCH.—This church, just completed, will be consecrated on Sunday 18th inst., when a very impressive ceremony will take place. The architect is Mr. Walter G. Doolin, M.A.

THE Enniskillen Town Hall is now completed, and we publish elsewhere in our columns a list of tenders for lighting electrically and by gas.

The building is from the designs of Messrs. Anthony Scott & Son, Drogheda, who were placed first in the competition held some time since.

RAPID progress is being made with the new asylum at Portrane.

THE Architectural Association, London, have selected Salisbury and neighbourhood as the venue for this year's excursion. Salisbury is the centre of a charming district, with plenty of good work all around—not to mention the Cathedral itself. We fully anticipate that there will be a large Irish contingent this year.

OUR own Association have had the temerity to organise an excursion on the other side of the water this year. Chester has been decided upon, and it is proposed to start on Friday night, 30th inst., returning Sunday morning. We are informed that the inclusive charge is extremely moderate. We hope the members will avail themselves of this opportunity of seeing some of the finest examples of half-timbered work. We are sure the committee will have no reason to regret the selection of a centre. We are asked to state that early application for tickets should be made to the Hon. Secretaries.

## THE ARCHITECTURAL ASSOCIATION OF IRELAND.

### SKETCHING AND CAMERA CLUB.

WE are informed that it has been arranged to resume the Saturday runs on alternate Saturdays, beginning Saturday, 17th June, for a run to Tallaght *via* Tercnure, near which there is an Elizabethan house of interest at Oldbawn.

Start from Earlsfort Terrace, corner of Adelaide Road, at 2.30 sharp.

The following additional runs are suggested:—

Saturday, 1st July, Portrane Asylum, by kind permission of the Architect, Mr. G. C. Ashlin, R.H.A. Train from Amiens Street.

Saturday, 15th July, Enniskerry and Powerscourt House. Train to Bray.

Saturday, 29th July, Maynooth. Train from Broadstone.

Saturday, 12th August.

A meeting will be held on the occasion of the first run to arrange details.

The Committee offer a prize of Two Guineas for the best set of Sketches in connection with this Club. (See Syllabus.)

We trust the younger members will make a good competition for this, and turn out some creditable work.

Mr. R. M. Butler is Hon. Sec. of the Club.

A GENERAL meeting of the Architectural Association of Ireland was held at the Grosvenor Hotel on Wednesday, May 31, Mr. J. H. Pentland in the chair. The Hon. Secretary read the result of the ballot for officers for the ensuing session as follows:—President, Mr. G. Sheridan, A.R.I.B.A.; Vice-Presidents, Mr. J. Holloway, Mr. M. J. Tighe; Committee, Messrs. Orpen, J. Pentland, R. M. Butler, T. E. Hudman, T. Coleman, L. O'Callaghan, C. H. Ashworth, F. Batchelor, Wm. Scott; Hon. Treasurer, J. H. Webb; Hon. Librarian, J. Geoghegan; Hon. Secs., H. Allberry, F. Hicks; Hon. Auditors, W. Sandall and J. W. Boucher. Mr. Pentland delivered a short valedictory address. The term of office of Mr. Butler, the Hon. Secretary, having expired, a vote of thanks to him was proposed by Mr. Allberry, and seconded by Mr. P. F. O'Sullivan, for the energy and attention with which he had directed the affairs of the Association since its inauguration in 1896. It is proposed that the Association visit Chester for their annual excursion and dinner on Friday, June 30. The following new members were admitted:—Messrs. G. G. Lynes, J. Baird, H. J. Lundy, J. M. Mitchell, Wm. Conolly.

### TARA HILL.

Chas. W. Groom, A.R.A., of Crowhurst, Carshalton, Surrey, arrived a few days ago at Tara Hill, and having introduced himself to Mr. G. V. Briscoe, the owner of part of the hill, acquainted that gentleman with the fact that he had been making masonic experiments and observations from which he was convinced that the Ark of the Covenant was hidden in the far-famed hill, at the same time requesting Mr. Briscoe's permission to excavate. This having been accorded, operations were commenced, but were interrupted by the arrival of Mr. Robinson, of the Board of Works, with a warrant, and Mr. Briscoe

decided to temporarily abandon the excavations pending a formal application to the Board of Works, which Mr. O'Shaughnessy promised would be duly considered.

**QUEENSTOWN CATHEDRAL.**—St. Colman's Cathedral is being extensively renovated, and Mr. G. C. Ashlin has prepared the necessary drawings and specifications for the completion of the interior. The tenders submitted by Messrs. Creedon, builders, of Fermoy, were accepted for the groined ceilings of the nave and transepts, the cleaning of the walls, and the carving of the strings, cornices, corbels, capitals, &c. Mr. J. A. O'Connell, of Cork, is attending to the sculptured subjects in the spandrels of the nave, also the erection and carving of the stonework of the shrines.

New Municipal Buildings are being erected at Henley-on-Thames from plans by Mr. Henry T. Hare, F.R.I.B.A. Mr. W. F. D. Smith laid the foundation stone last Friday.

The Restoration of Croyland Abbey has been decided upon. The north wall of the tower is to be taken down and new foundations are to be laid.

New Barracks at Winchester were opened last Thursday by the Prince of Wales.



#### ARCHITECTURE AT THE ROYAL HIBERNIAN ACADEMY.

THE show of drawings is far from numerous this year. The best drawing in the room is Mr. H. W. Brewer's illustration of Mr. Thomas Drew's design for the proposed Chapter House at St. Patrick's Cathedral, Dublin. The drawing is a fine piece of work, and the scheme would unquestionably greatly add to the beauty of our National Cathedral. We hope to see it realized at an early date.

Messrs. A. Scott & Son, Drogheda, shew a large perspective drawing by Mr. William Scott, of the competition design, for the Enniskillen Town Hall. Messrs. Rawson Carroll and Batchelor exhibit a drawing by Mr. A. W. Moore of a picturesquely situated residence near Delgany. The design is simple and pleasing.

Messrs. Hall, Cooper, and Davis, have a nice pen and ink drawing.

Mr. L. M. Mitchell's design for business premises for Messrs. Pim Brothers is also lung.



THE proposition that the Irish-Americans of New York should raise £30,000 as a popular subscription in order to purchase the Lakes of Killarney and the surrounding property for preservation as a public park has met with enthusiastic approval. It is believed that the money will be easily raised. The present plan is to raise the purchase-money and place it in the hands of a board of trustees composed of the Mayor of New York, Archbishop Corrigan, and four others.

A REMARKABLE project for travelling by means of air ships is attracting attention at San Francisco. Elaborate offices have been opened by the Aerial Navigation Company, which advertises that it will convey passengers from America to the Paris Exposition in thirty hours. It is asserted that this will be done by means of three immense airships, each 425 feet long, which are being built.

#### THE ROYAL INSTITUTE OF ARCHITECTS OF IRELAND.

##### A NEW METHOD OF VENTILATING SEWERS.

PAPER.—BY SIR CHARLES CAMERON, C.B., M.D.

A meeting of the members was held in the rooms, 20 Lincoln Place, on 15th May, 1899. Mr. J. Rawson Carroll occupied the chair. Amongst those present were—Messrs. Walter G. Doolin, M.A.; William Mitchell, C. J. MacCarthy, City Architect; Wilmot, Frederick Hicks, H. Allberry, J. Howard Pentland, M.A.; R. M. Butler, and A. E. Murray, Hon. Sec.

The Minutes of the previous meeting having been read and signed, the chairman called on Sir Charles Cameron, who then addressed the meeting as follows:—

The ventilating openings in the street sewers, which are now so general in almost every town in the United Kingdom, have not met with universal approval. When first used many complaints were made of the unpleasant odours emitted from them. The late Sir Robert Rawlinson was wont to say when such a complaint was made, "Put more ventilators in the sewer." No doubt the larger the number of ventilators the less the odours from any one of them. Practically the sewage of Dublin is now conveyed in sewers open to the external atmosphere. If they were altogether open it would be better than their present state of being open only at certain points. The houses opposite those points receive more than their due share of whatever comes out of the sewer, whereas if the sewer were as open as a ditch, every house would be treated alike to the emanations, if any, from it.

I am bound to say that as a rule there are no sensible nuisances caused by the street sewer ventilators; but there are occasional exceptions to this rule. Now and then persons complain to the Public Health Committee that the ventilators near their houses are offensive. On examination these complaints are generally found to be justifiable. Ordinary sewage generally has very little odour until it becomes stale; but now and then what may be termed exceptional sewage, having an offensive odour, flows through sewers in our streets, and it is chiefly from such sewage that the offensive emanations come through the ventilators.

The chief object in the use of ventilators is to prevent a greater pressure of air on the sewers than that of the external atmosphere. It is assumed that the gases generated by the fermentation of the organic matter always present in sewage might cause the sewer air to acquire sufficient pressure to force the traps on the house drains connected with the sewer. I have always doubted very much that the sewer gases could acquire a pressure sufficient to displace two or three inches of water. I have made many experiments in reference to the so-called pressure in the air of sewers. I have had the sewer ventilators closed on considerable lengths of sewer mains, and have inserted delicate pressure gauges in them. I never observed any pressure, except of the most trifling kind, in the air of the sewers when the ventilators were closed. I did, however, notice that in the early morning, air often passed into the sewers from the streets. This descent of the air into the sewer I attributed to the insuction of air from the sewer into houses, the drains of which were untrapped or provided with defective ones. When the fires began to be lighted in the kitchens, air was drawn into the street sewers, especially in those parts of the City inhabited by the poorer classes. According to my experience, the pressure which may occasionally be observed in the sewers is sometimes caused by the wind.

When a strong gale is blowing, gusts of wind enter the sewer through the ventilating opening.

The second object in ventilating sewers is to protect the workmen engaged in cleaning or repairing them. I greatly doubt that the emanations from ordinary sewage are so abundant and dangerous as to imperil life or health. The manholes should, of course, be open for some time before the sewer was entered. Death of workmen from inhalation of sewer gases have not been infrequent, but it has been caused not by ordinary sewage air, but by sulphuretted hydrogen set free from refuse from gas works, or from waste gases from gas engines allowed improperly into sewers or from other exceptional causes.

It is worth noting in connection with the subject of this paper, that the sewers of one city, as large as Dublin, are not ventilated at all. This city is Bristol. Its sewers discharge their contents into a tidal river in which the water rises so high that for a large portion of the day the sewage cannot escape into the river. Bristol enjoys a remarkable immunity from typhoid fever, and I am informed that no injury to the health of the workmen who cleanse the unventilated sewers has taken place.

Notwithstanding the experience of Bristol, I confess that I am in favour of the ventilation of street sewers, though not by the means now generally employed. I object to the ordinary sewer openings in streets which are narrow and confined, and I have suggested another method of ventilation, which my colleague, Mr. S. Harty, City Engineer, has approved of and uses under certain circumstances. In order to explain my system it is necessary to say a few words in reference to the passage of gases through certain solid substances. If we take a gas, say oxygen or hydrogen, and enclose it in a vessel of metal, glass, or glazed porcelain, it will remain there for an indefinite period; but if the vessel is composed of unglazed porcelain or plaster of Paris, the gas will rapidly pass out of it. If a galvanic porous cell be connected with a glass tube, the latter filled with water, and its open end sealed in water, and a vessel of coal or hydrogen gas be placed over the cell, the water will be immediately expelled from the tube. This phenomenon is explained as follows:—All gases diffuse in right lines in all directions. The lighter gases diffuse more rapidly than the heavier ones, and all pass through porous materials. As coal gas is lighter than air, it passes more rapidly into the cell than the air in the cell passes out it, and therefore pressure is caused, as shown by the expulsion of water from the tube.

I have applied this property of the diffusion of gases through porous materials to the ventilation of sewers. Cylinders, composed of a mixture of two parts of porcelain clay and one of sulphate of lime, 18 inches in height and 6 inches in diameter, are used. Four or six are inserted in the crown of the sewer, and in a chamber resembling that used for the ordinary ventilators. The rain that enters the chamber from the street is carried into the sewer through a small syphon, and no wet can get at the cylinders.

As the cylinders allow air to pass freely through them, but effectually bar the passage of micro-organisms, there can be no greater pressure in the sewer air than in the street atmosphere. Air continuously comes out of the sewer, filtered through the cylinders, and air as continuously enters the sewer through the porous vessel. The action of the filter on the air resembles the action of a Pasteur filter on water.

The sewer diffuser ventilator is manufactured by Messrs. Doulton, of Lambeth, London, and Burslem, Staffordshire.

The "fresh air inlets" of the house drains are often the outlets for foul air. When they are placed in the basement

areas of houses they not infrequently cause an unpleasant odour. Whenever a w.c. is flushed the air in the soil pipe is forced out through the inlet into the external air. Mica valves are occasionally used at the inlets to prevent the gases from the soil escaping into the atmosphere. They are never air-tight, and soon go out of order. A better protection against the emission of foul air through the inlet would be a porous plate such as is used in the diffuser ventilator. As every precaution is usually taken to prevent even a "pin-hole" in the soil pipe, it seems contradictory that a large opening should be made in it.

In conclusion, I may state that the sewer diffuser ventilator has given satisfaction in Dublin, and has been found efficacious. They have been in use for the last two years, and, on examination, have been found to remain quite clean.

Mr. Albert E. Murray, Hon. Sec., proposed a hearty vote of thanks to Sir Charles for his able and instructive lecture. Mr. W. M. Mitchell seconded the motion. The Chairman, in putting the vote to the meeting, spoke of the readiness with which the Lecturer had acceded to the Secretary's request to deliver a lecture. They all knew what a busy man Sir Charles was, and the members were much indebted to him for his kindness.

The vote was passed with acclamation.

Sir Charles Cameron, in replying, said it was a great pleasure to him to again address a meeting of the Institute. It was not the first time he had done so. The Institute had many years ago done him the honour of electing him an honorary Fellow, and in 1869 he had ventured to read before them a paper on Street Architecture.

After some remarks and enquiries from Mr. W. G. Doolin, M.A., and other gentlemen, the proceedings terminated.



## ANNALS OF MONKSTOWN AND SOME NEIGHBOURING PARISHES IN THE COUNTY OF DUBLIN.

By FRANCIS ELLINGTON BALL, M.R.I.A.,  
F.R.S.A.I.

### CHAPTER II.

#### THE FIRST THREE CENTURIES OF ENGLISH RULE.

THE portion of the County Dublin, comprised within Monkstown and the other parishes, cannot have escaped the devastation of the lands adjacent to Dublin, by which Dermot and his Anglo-Norman allies first secured the submission of that Danish stronghold, and in the two years during which Dublin was in a state of almost perpetual siege, must often have resounded with the din of battle. The Anglo-Norman invaders landed near Wexford and Waterford, and, so far as is known, did not make use of ports nearer Dublin; but while King Rodrick O'Connor was besieging the invaders in Dublin, a portion of his forces are said to have been placed at Dalkey to assist the arrival of his Danish allies who were expected to land there.

No sooner had Henry II. arrived in Ireland than he began to reward his valiant warriors by giving them grants of lands. In the district comprised within Monkstown and the other parishes he found but little to bestow on them. With lands dedicated to the Church he did not interfere, and, as we have seen, the greater portion of the district was in possession of the Cathedral of the Holy Trinity, commonly called Christ Church, which, shortly before the invasion, had been converted into a Priory of Augustinian Monks, and of St. Mary's Abbey, which

rose to a position of the greatest importance under the Cistercian order.

The lands comprised within Monkstown and the other parishes were, owing to their proximity to the mountains of Wicklow, subject, during the next three centuries, to constant incursions from the O'Byrnes and O'Tooles. During the thirteenth century little (if any) effort was made to keep these tribes in check, and at the beginning of the fourteenth century so much was the Abbot of St. Mary's in their power, that he was forced to negotiate with them for the restitution of goods, which they had carried off from Monkstown and Bullock. But, as that century went on, organised resistance was offered to their inroads. A garrison of soldiers was maintained by the Crown in the neighbourhood of Bray, and a militia force was raised amongst the inhabitants of the district. To assist these, when the Irish became more than usually aggressive, reinforcements were sent from Dublin. Carrickmines appears to have been the point at which opposition was generally made to the advance of the tribes. To that place on two occasions John Colton, then Dean of St. Patrick's, and afterwards Archbishop of Armagh, marched at the head of a strong force, and there remained under arms, on the first occasion for eight days, and on the second for no less than a month. On the side of the district, comprised within Monkstown and the other parishes, facing the mountains, the inhabitants constructed a high bank of earth, surmounted by a prickly hedge, to keep their cattle within bounds, and to prevent the Irish in their raids driving them off without hindrance. This fence started from near Dalkey, and skirted round Loughlinstown, Carrickmines, Kiltarnan, and Whitechurch; thence it went on to Tallaght. It became part of the barrier which surrounded "the Pale," as the four counties obedient to English rule—Dublin, Kildare, Meath, and Louth—were called.

The possessions of the Priory of the Holy Trinity were returned at the close of the thirteenth century as unable to pay any taxation. In the fourteenth century, although there was little, if any, improvement in the general state of Ireland, there was a great advance in the condition of the lands bordering on Dublin, probably owing to the measures which were taken for their protection. A flourishing home farm was then established by the Priory of the Holy Trinity at Kill of the Grange, and the remainder of their lands were let to prosperous and well-to-do tenants. Most of these were bound, in addition to the payment of rent, to perform certain work, which is set out with much detail in their leases, on the Priory farm, and over them the Priory, like a lay owner of that time, exercised manorial jurisdiction. One of the monks, who occupied the position of seneschal or land agent, held from time to time, at Kill of the Grange, a court, where misdemeanours were redressed, and such disputes of property as arose on the manor were settled.

At the Grange a priory house was built which, though a primitive dwelling, was sufficiently commodious to accommodate the Archbishop of Dublin for several days, and was frequently occupied by the Prior. Near to it stood the farm buildings, made of a framework of wood procured from Glencree, with walls of mud, and thatched roofs. Not far off were two villages—probably corresponding to the modern villages of Deansgrange and Kill of the Grange—known as "the town of the church," and "the town of the Grange." In the former there were twelve tenants, in the latter thirty-five. Amongst them were the clerk, two smiths, a mason, and an officer called the chamberlain. The fact that the clay was suited for the manufacture of pottery—an industry which now flourishes at Kill of the Grange—was

then known and the sale of the clay from "Pollaghs," the place of poles, was a source of income to the Priory. A wood, which was near the Grange, or a bog, which lay between it and Stillorgan, afforded fuel for the inhabitants.

Of life on the Priory farm, Mr. James Mills, M.R.I.A., has afforded us a vivid picture in the account rolls of the Priory which he has so ably edited. There we read of the live stock, of the crops, and of the implements. We make acquaintance with the monks, with the tenants, with the bailiff, who accounted even to a peck for the corn which went through his hands, and with the remainder of the farm staff. We follow the agricultural operations throughout the year—the Winter and Spring ploughing, when fourteen ploughs, with twenty-eight men, turned out "by custom" to plough; the thinning and cleaning of the crop, when sixty-four men came to hoe; the haymaking and the harvest, when as many as eighty-eight men were reaping on one day, and for three weeks an average of thirty reapers were employed each day.

Those who worked for the Priory were fed by it, and we can picture when dinner hour came the weary workmen flocking round the bailiff, in response to a shrill blast from his horn, to partake of the pork and herrings, of the bread and ale, which he had provided for them. During harvest the Prior very frequently came to the Priory House, and one of the monks constantly stayed there. Open house was kept for the principal tenants and neighbours, and for their entertainment the bailiff procured mutton and pork, beef and fowls, herrings and eggs, wine and ale, in unstinted quantities.

The Priory retained nearly half of its lands in its own hands. Amongst the lands let to tenants were those of Murphystown, Tipperstown, where the Vartty Reservoir now stands; Killiney, and Brennanstown, also land near Carrickmines, at Stillorgan, and at Dalkey.

In addition to its lands, the Priory of the Holy Trinity had been given, immediately after the Norman Conquest, the churches which stood on them namely Kill-of-the-Grange, Killiney, and Tully. During portion of the thirteenth century, the church of Kill-of-the-Grange, although thus granted to the Priory, formed with the church of Dalkey, a prebend in the collegiate church of St. Patrick. This prebend on the conversion of St. Patrick's into a cathedral, became part of the treasurer'ship, and the prebendary of Clonkeen or Kill-of-the-Grange was made the first treasurer. The prebend was valued at £26 10s., which would be equal to about £500 of our money. Subsequently Kill-of-the-Grange became a mother-church with the churches of Stillorgan and Monkstown attached to it as subsidiary chapels, and an exchange having been effected with St. Patrick's, the church of Kill-of-the-Grange became the absolute property of the Holy Trinity. It was enlarged, probably in the thirteenth or fourteenth century, by the addition of a church, and the bell-turret was, no doubt, then added.

Like the possessions of the Holy Trinity, those of the abbey of the Blessed Virgin Mary were returned at the close of the thirteenth century, as of no value "on account of war." This the white monks, as the monks of the Cistercian Order were called, from the colour of their clothing, had to wage with the inhabitants of the mountains, as much in protection of lands owned by the Abbey at Killucan and Glencullen, as of their property nearer the coast. In the fourteenth century, Monks-town, or Carrickbrennan, as it was then called, had become a manor, and the Abbey had established a home farm there. The buildings which they erected on it were a great contrast to those at

Kill-of-the-Grange, and were described as a chief mansion with three towers. Remains of these are still to be seen. The chief mansion was surrounded by lofty walls which enclosed a large space of ground, known as a bawn. This provided a place of refuge for the inhabitants of the vicinity and for their cattle, when raids from the Irish were apprehended. Near this stronghold, there was a village, and there was another village at Newtown which lay near where Seapoint is now situated.

The church of Carrickbreunan, or Monkstown, was, immediately after the Norman Conquest, given to the Abbey of St. Mary, but afterwards became attached, as has been mentioned, to the church of Kill-of-the-Grange.

At Bullock, the Abbey of St. Mary erected also a strongly fortified castle and bawn. The former served to protect the interests of the Abbey as well by sea as on land, for the fort of Bullock was much frequented by fishing vessels, and the Abbey derived a large income from the tolls levied for the use of the port.

Dalkey was given by Henry II., immediately after the Conquest to Hugh de Lacy, the first Governor of Dublin. Part of that place, including the island, de Lacy gave to the See of Dublin. The castle soon became a valuable possession as the port of call for ships trading with Dublin, for so shallow and dangerous was the Liffey, that ships, small as they were then, could not approach the port of Dublin when fully laden. The town became soon one of corresponding importance; fairs and weekly markets were held there. The lands of Rochestown were included in Dalkey. These, at the commencement of the thirteenth century were in the possession of the Talbot Family, subject to their rendering annually to the town, a Goshawk, one of the birds most esteemed for the purposes of Falconry. In the fourteenth century, Dalkey was a busy commercial centre. A strongly fortified town, containing seven castles had been built. It was surrounded on three sides by a well and a moat, and on the fourth side by the sea, from which a paved causeway led to the castles. There, it had become the custom for the Dublin merchants to buy their goods, and thence they transported them either by sea in boats, or by land to Dublin. As well as being the port for merchandise, Dalkey was the Kingstown of Ireland in the middle ages, and there the viceroys and other officers of State, usually, both embarked and disembarked.

The church of Dalkey formed, as has been mentioned, in the beginning of the thirteenth century, part of the corps of a prebend of St. Patrick's, and was transferred, about the middle of that century, with the church of Kill-of-the-Grange, to the priory of the Holy Trinity. There was constant litigation as to the right of visitation by the See of Dublin over the churches of the Priory, and at Dalkey and Stillorgan forcible resistance was on one occasion offered to the Archdeacon of Dublin when he came to visit those churches.

Stillorgan, in the twelfth century, came into the possession of Raymond Carew, and was subsequently held by his son, who bore the same name. Portion of the lands stretched down to the sea, and this part Carew gave to the Abbey of St. Mary. Another portion, called "the church lands," he gave, together with the church, to the Priory of the Holy Trinity. Stillorgan was held for the Crown by military service, and the owner was bound to provide an armed horseman and half of another. This service Carew compounded for by paying £3, or about £45 of our money. At the close of the thirteenth century the lands were occupied by the Hacket family. A century later they were in possession of Sir John Cruise, who owned the adjoining

manors of Thorncastle, now Booterstown, and Merrion. He was distinguished both as a diplomatist and as a soldier, and held the office of a justice in eyre, or judge going circuit. During his lifetime he gave a house and lands at Stillorgan to John Derpatrick, and his wife, who was probably Cruise's daughter; but on the death of their sons without male issue Stillorgan reverted to the Cruise family, from whom it passed again, in the female line, to the Plunkett family. The lands were divided in the fifteenth century amongst a number of tenants, one of whom inhabited "the great stone house."

Stillorgan Church was, as has been mentioned, attached to the church of Kill-of-the-Grange. The spiritual wants of the inhabitants were well looked after, and at Stillorgan, as well as at Tully and Dalkey, there was a resident chaplain.

Kilmacud, which formed part of the manor of Thorncastle, was given after the Conquest to Walter de Rideleford, Lord of Bray—a valiant invader, to whom was granted a large extent of country. It came, however, again into the hands of the king in the thirteenth century, and was then given to William le Devenays, from whom it passed to Sir John Cruise, the owner of Stillorgan. The church was given by de Rideleford to the Convent of Grange, near Castledermot, in the County Kildare, which was founded by him. The church was valued, in the fourteenth century, at £6, or about £90 of our money, and remained in the possession of the convent of Grange until the Reformation.

The townland now known as Leopards-town, but properly Leperstown, came very early in the thirteenth century into the possession of the Leper Hospital of St. Stephen in Dublin. Cornelsecourt, near Cabinteely, became, probably about the same time, the property of the Abbey of Lismullen, in the County Meath, to which it belonged at the time of the Reformation, and Carrickmines, which, from its proximity to the mountains, and as the scene of constant warfare, could have been but of little value, appears to have been portion of the property of the great Brien family. In the fifteenth century the lands were occupied by the Walsh family, who were placed there as "hardy wardens," capable of resisting the enemies of the king.

(To be continued.)

#### NOTE C.

##### DERIVATION OF PLACE NAMES.

The names of many places within Monkstown and the other parishes, are of Irish origin. Dr. Joyce ("Irish Names of Places") gives the following derivations:—Ballybrack, Ballybrackagh, the speckled town; Clonkeen, the old name for Kill-of-the-Grange, Cluain-caoin, the beautiful meadow; Delginis, or Dalkey, thorn island; Dunleary, Leaghaine's dun; Glas-thule, Tuathal's or Toole's streamlet; Glenageary, Gléann-na-gaecearach, the glen of the sheep; Glenamuck, the glen of the pig; Killiney, Cill-Nighen, the church of Lenin's daughters; Loughlinstown, Baile-an-lochain, the town of the little lake; Stillorgan, Tigh-lorcan, the house of Lawrence; Scalpwilliam, the cleft of William; Ticknick, Tigh-cnuic, the house of the hill; Tipperstown, Baile-an-tobair, the town of the well; Tully, Tulaich, a hill.

#### NOTE D.

##### THE CASTLES OF BULLOCK, DALKEY AND MONKSTOWN.

In a paper on "The Ancient Domestic Architecture of Ireland," read before the Society of Antiquaries, in 1859, by that eminent authority on Mediaeval Architecture, John Henry Parkes, Esq., F.S.A. (*Archæologia*, vol. xxxviii., p. 162), a description will be found of the two castles at Dalkey, and of the castle at Bullock, which are still to be seen. Mr. Parkes was of opinion that they were structures of the twelfth century, as he thought also was the church in the town of Dalkey, but says they may possibly have

been of later date. In Grose's "Antiquities of Ireland," vol. i., pp. 8, 14, there are beautiful engravings of these castles. There is also mention of them in Wakeman's "Handbook of Irish Antiquities," p. 227, and a description of them by Mr. Wakeman in Gaskin's "Irish Varities," p. 70. Much information about "Bawns" is to be obtained in a paper on these enclosures, by Henry T. Lee, Esq., M.R.I.A., in the *Ulster Journal of Archaeology*, vol. vi., p. 126. The castle of Monkstown Mr. Wakeman considers to be a contemporaneous structure.



## THE ARCHITECTURAL ASSOCIATION, LONDON.

PAPER BY MR. FRANK MACEY.

### SPECIFICATIONS.\*

As another aid to the clearness of a specification, divide the descriptions into many clauses, and do not make the clauses too long, nor omit an occasional full stop. Also keep the clauses well apart, and do not crowd them together; any item will then be quickly seen, and you will not have to question to which part of the building a description belongs.

Conceding the point that a specification should be perfectly clear at a glance, the question arises: Should the work be divided into separate trade headings? As a general principle this is unavoidable, and I think desirable; but I would also say, without hesitation, that very many distinct items of work would be clearer and more comprehensible if the various trades relating to them were not separated, but the complete item of work described under the one heading, placed in whichever part of the specification seemed most desirable. Thus, to illustrate:—

Take an iron casement window, with wood frame, linings, and the usual glass and fittings. Ordinarily this would come under several trades; but I would describe everything connected with that window under the one heading of, say, joiner—that is, the iron casement, the wood frame, linings, shutters, and finishings, the ironmongery and glass, and with, perhaps, a cross reference in smith, stating that the iron casements are described in joiner. The builder will see at a glance all the requirements of that window, and the client, if he peruse the specification, will also have an idea how it will look when finished. Another example: Take an iron girder. I would describe under smith and founder the girder itself, the templates, cover stone, any cement packing, felt or lead seating and the painting. Perhaps it might be better to generalise the painting under painter in the one description applicable to all girders and covered-up ironwork, and in that case a reference should be put under smith and founder. There will then be no excuse for the painting to this work escaping the builder's attention.

When describing the work to small alterations, repairs, or decorations, it is almost essential to adopt this order of running on the description, regardless of trade headings and formalities. Of course, when work is let to separate tradesmen you cannot adopt this method.

A building contract, which is often referred to in a general way as the specification, is understood to include the conditions of contract, the form of contract—that is, the actual agreement; and the specification of the subject matter embraced in the contract. The conditions of contract and the form of contract should only embody, so to speak, the actual legal requirements which, taken by themselves, do not affect the description and value of the work and

\* By Mr. F. W. Macey. Read at Architectural Association, London.

materials. These strictly legal clauses I do not propose to touch upon.

But it will often be found in many specifications that under the leading conditions of contract are placed many clauses which do not actually affect the amount of the estimate. This, I think, is a mistake, for at the time of tendering, a builder so often only hurriedly scans the conditions of contract; and, when reading them over again, preparatory to signing the contract, may, unfortunately, find there are several items included which he has omitted to price in his estimate. The client does not always see his point, and the builder either has to bear the loss or throw up the work. This remark chiefly applies to a work for which no bills of quantities have been prepared.

But that part of the contract, or, in other words, the specification itself, of the actual work and material, should embody every item which may in any way affect the estimate; therefore, under the general clauses, or preliminary items, as they are often called, I would include the following matters, which are so often to be found only under the conditions of contract. The date of completion—this requirement may necessitate an extra allowance for overtime or other special employment of labour; the mode of payment—under certain conditions the builder may require to borrow money to enable him to carry on the work between the times allotted for payment; keeping the work in repair for a stated period after completion—this may necessitate an allowance to cover any matter which may crop up under this item; the insurance fees and fees to any authority should also be included under this heading of preliminary items, as also any other matter not coming under a trade heading which may possibly require a price. Just a hint as to the outside cover of a specification—put as a reminder in red ink a note of the insurance and date of completion. One is apt to forget these things.

Then as to the marginal references. It will be found a great convenience to all parties if a marginal note is given to each distinct item of work. It will be then seen at a glance where a "bath casing" is placed, or the "spandril framing to a staircase," instead of having to wade through pages of other subject matter. In addition to the marginal notes, I would put all the principal items under sub-headings, so to speak, in their respective trades. Such as all wood staircases under a sub-heading of "Staircases" in carpenter and joiner; similarly, all casement windows under a sub-heading of "Casement Windows," and all other such divisions of work. And when you come to the many minor items which only require a separate clause to each, these might be put under the one sub-heading "Other Items" or "Other Fittings." These sub-headings should be written across the page.

As to numbering the clauses. This, I think, very important. It will be found of great assistance to be able to refer to the number of a clause in a letter when calling the builder's attention to any special part of the work, as also in the case of cross-references when referring from one part of the specification to another. Each separate clause need not necessarily be numbered, but only each distinct item of work which may embrace several clauses. As to marginal sketches to illustrate rather involved parts of the specification, I think in many cases these will be found very useful. I would then suggest that the lithographer take them direct from the architect's sketches. If the specification is typewritten or fair-copied in the office, then either do all the sketches yourself, or else see for yourself that they are copied correctly.

Where should provisional amounts and prime cost items come in a specification? Should each amount come under the trade in question to which it refers, or should

they all in a body be put together? I think no hard and fast rule can be applied to this, but small provisional amounts should run on with the subject-matter to which they refer; and distinct and perhaps more costly provisional amounts, of which there may be no other description in connection, should be all placed together under the one heading "Provisional Amounts," either immediately following the preliminary items or else at the end of the specification. The general run of "Prime Cost Items" usually apply more to small matters, and these, I think, should follow the items to which they refer; but if of any considerable amount, I would then put them also under the heading "Provisional Amounts."

Should a specification have an index similar to that provided with a technical or scientific work? I think this would be very useful, and it certainly would make a specification a more complete and handy document. The index need only refer to the principal items. Sometimes it is difficult in a specification to locate the description of a particular part when there is no distinct mark or name on the drawing. Some employ the points of the compass; that is very well if they will apply, but when you get a position perhaps centrally situated, it rather fails in its objects. I prefer in such cases to put a number or a letter, and that perhaps in a circle, against the part in question, and so refer to it in the specification. Many of these references will not be required, as the drawings will generally be sufficiently clear to locate the descriptions by referring to the ordinary parts of the building by name or position.

Should an old specification be referred to when describing the work relating to another building? I think only so far as the general clauses are concerned, such as those under the preliminary items, the preambles to the various trades and the other general covering clauses under those trades. But the details of the work I would write entirely in the first place without any reference whatever to a former specification. All detailed descriptions cannot be exactly alike, and you will be far more likely to put in any necessary variation of the detail in question if you think it out as you go along, than if you copy an old description and alter it afterwards to suit, because when you copy an item you cannot properly be thinking out the details yourself.

To obviate omitting, so to speak, any of the general items common to all work, have by your side a form or tabulated index of the items coming under the various trades. This can be looked down at a glance, and all the items extracted which may be required.

There is one word in a specification of which the meaning is often disputed. It is the word "best" when applied to workmanship and materials, especially to materials, and is, I grant, somewhat ambiguous. But I would not use such terms as "best finest," "extra best," "super best," "best best," and so on, but merely employ the word best once and for all, and attempt to define its meaning. Here is a suggested definition of this word:—The word "best," as applied to materials, articles, and workmanship, shall mean that there is no superior quality of material or finish of article in the market, and no better class of workmanship obtainable. In fact, by defining this word "best," it will only be necessary to mention it in the one clause when stating that all materials and workmanship are to be of the best quality and class.

We are all apt to fall into the error of describing certain materials mechanically, such as timber from a market which has long since been entirely exhausted, or stone from a worked out quarry, or we use misleading and exaggerated language, "timber free from knots," demanding what, in our

own minds, we never expect to obtain. We should only specify what we can get, what we mean to have, and then see that we get it. At the same time we must not lose sight of the fact that our endeavour must be to obtain the most suitable and best material procurable in the market and that the work when executed shall be a credit to all.

As to the question of sub-contracts, this, I fear, would take some time to discuss, but, as a general rule, let the sub-contract go through the general contractor; but when this is impossible, then make the sub-contractor subject to all the conditions of the main contract equally with the general contractor; and in the main contract stipulate that the general contractor is to give every facility to the sub-contractor and allow him the use of his scaffolding and plant.

(To be continued.)

## NORTH DUBLIN.

### RURAL DISTRICT COUNCIL AND GUARDIANS.

The North Dublin Rural District Council Meeting, at which Mr. Joseph O'Neill presided, was held yesterday in the Boardroom of the North Union.

#### THE PURCHASE OF KILLARNEY.

Mr. Goggins moved that the council take steps to get a petition signed by the county and district councillors all over Ireland, with the object of approaching Mr. A. J. Balfour for funds to purchase and preserve Killarney for the benefit of the Irish Nation, and that a committee of the board be appointed to carry out the same.

Mr. Wm. Hoey seconded the motion which was passed unanimously, but no committee was appointed.

#### WATER WANTED IN ARTANE.

Complaints were made of the great want of water in Artane and Donny-carney labourers' cottages. As the new boundary of the city will extend almost to these places, it was decided to inform the Corporation of the bad state these people are in, and ask them to supply water to these places.

#### CABRA WATER SUPPLY.

A letter signed by Mr. Thomas P. Smyth, was also read. It stated:—

"Last evening, at a public meeting of the Cabra National Registration Association, a number of members again complained of the want of water supply in the Cabra District. There are 14 Union cottages in the district occupied, besides 10 cabins, all without water, the only supply to this number being derived from local ditches, at any time totally unfit for human use, but now, owing to the excessively hot weather, this source is dried up. Your board will readily understand, that apart from the great domestic inconvenience caused, the consequences, should illness, epidemic or otherwise, occur, would be serious. Mr. H. P. O'Sullivan and myself are appointed a deputation to bring this question before you, and respectfully request your urgent consideration with reference thereto."

#### THE LIGHTING OF HOWTH.

Mr. Wm. Lynch moved a resolution requesting the Local Government Board to give the council the power of lighting

Howth, Howth Demesne Quarry, Burrow, Sutton North, Sutton South, and Censure. He thought the development of this district was greatly impeded by the want of light at night. There were 550 houses in the district, and a stationery population of over 2,500. In summer the population is over 5,000.

The motion was seconded by Mr. Barry and adopted.

THE NEW POST OFFICE IN ENNISKILLEN.

The following letter from Mr. Jordan, M.P., appears in *The Fermanagh Times* :—

House of Commons, 13th June, '99.

DEAR SIR,—I called on Mr. Smyth at the General Post Office to-day. He showed me the Plans of the New Post Office for Enniskillen. It is not so large a building nor so ornamental as I expected—but it will be only offices, with apartments for caretaker, and no residence for the Postmaster.

However, judging from the Plans and Sketches, it will be a fairly good block of a plain house about 2½ stories high.

The ceiling of the ground or first story will be 16 feet high and will be the general public office, entered by a door next the Royal Hotel.

The ceiling of the second story will be 13 ft. high, and will be the telegraph department, and then there will be an attic with a ceiling 9 ft. high, with windows in the roof somewhat like the windows of the Masonic room in the New Town Hall. The roof will rise about 6 ft. higher. These rooms will be for the use of the porter.

The frontage will be about 44 ft., and a large iron gate will occupy the remainder of the space next Mr. Trimble's.

The plans go back to Dublin to-night. Mr. Smyth thinks that specifications will soon be made and tenders invited for the building. He expects that it will be well commenced this year—not finished, as only £1,000 has been taken in the estimates for it for 1899.

They seem to have made sufficient provision to accommodate all the hands, male and female, and plenty of room for all departments of their work—though, of that, I am no judge.

They contemplate laying out on buildings, exclusive of the purchase of the ground, between three or four thousand pounds—so Mr. Smyth informed me.

I purpose asking a question in a day or so as to the course of their future operations.

The above is all I could gather and thought you might wish to know.—Very truly yours.

JEREMIAH JORDAN.

The Plans for the Restoration of Paisley Abbey have been approved of by the Executive Committee. The architect, Dr. R. Rowand Anderson, has arranged for the work to be done in sections, so as to interfere as little as possible with the public worship in the church. The first portion to be undertaken will be the restoration of the transepts, and the four great arches of the centre tower, and then will follow the rebuilding of the choir, the foundation and lower walls of which are still intact. The final portion of the work will be the completion of the tower. Some contention has taken place as to whether it was a tower or a spire which adorned the abbey in olden times; but the architect states that the probabilities point to its having been a tower only, finished with a cape and saddleback, as in the Dundrumman, Sweetheart, and other abbeys. The total cost of the restoration will be about £40,000.—*Builder's Journal*.

LEGAL NOTES.

STAFFORD v. MONAHAN,  
(Before Mr. Justice Kenny.)

This case, arising out of an arbitration in connection with a Builder's bill of extras, involved several points of interest to architects. The plaintiff, a builder and contractor in Longford, claimed a sum of £220 for extra works. Defendant, also resident in Longford, denied the liability, but lodged a sum of £113 in court, and further counter-claimed for works alleged to have been included in the original contract, but not executed, and also for defective workmanship.

The account had been originally referred to the arbitration of Messrs. J. Caldwell Thompson, C.E., and Charles Leonard, C.E., with Mr. R. M. Butler, architect, as umpire. Owing to the fact that the arbitrators had not placed the facts before the umpire within the time named in the submission the arbitration and award were not specifically pleaded; but the amount awarded was lodged in court by the defendant. Owing to the fact that the arbitration was not in the pleadings the learned judge at first refused to allow the proceedings to be referred to, but, subsequently, in consequence of the questions put in cross-examination of the defendant's witnesses, he permitted the facts that transpired before the arbitrators to be deposed to as ordinary evidence of admissions or fact. Subsequently the umpire was examined, and produced his award; which together with other documents connected with the arbitration, were allowed to be marked for defendant.

The arbitrators had agreed on a number of points, the remaining items only being left to the umpire's decision, and he embodied the results arrived at by the arbitrators in his award. The document previously setting forth the items agreed on was signed by one arbitrator only. The question would then arise: was the umpire justified in accepting a return in such form after calling on both arbitrators for their statement? It was apparently held that he was. It was further alleged by the plaintiff that a number of important items in the original contract had been interpolated by defendant without his (plaintiff's) knowledge and consent, and he claimed for these as extras. The defendant pleaded that all the interlineations in his handwriting were inserted with the full knowledge and approval of plaintiff.

Ten questions were left to the jury, the chief being as follows:

a. Were the interlineations in the estimate when signed? Yes.

b. What extra works (if any) were executed by plaintiff over and above amount lodged in court? None.

c. Were certain works contained in contract not carried out; if so, assess damages? Yes; damages, 1/-.

d. Was the workmanship defective; if so, assess damages? Yes; damages, 1/-.

Judgment for defendant, amount lodged in court to remain as security for defendant's costs.

Messrs. Beardwood and Leonard were examined for the plaintiff, and Messrs. J. C. Thompson and R. M. Butler for the defendant.

For the plaintiff—Mr. Matheson, Q.C.; Mr. Wakely, Q.C., and Mr. O'Connor (instructed by Mr. H. Mills).

For the defendant—Mr. Drummond, Q.C., and Mr. P. Law-Smith (instructed by Mr. T. W. Delany).

FEE v. HAGUE.

An important arbitration was held in Room No. 2, Four Courts, on 24th May and subsequent days, before Messrs. Walter C. Doolin, M.A., and James Perry, M.E., Arbitrators, with Mr. W. M. Mitchell, R.H.A., as Umpire.

The plaintiff, Mr. Thos. Fee, is an

extensive builder and contractor in Longford; and the defendant is Mr. Robert Hague, J.P., D.L., of Monahoe House. The question at issue arose out of a claim for extras on the ground of errors and omissions in quantities, and involved several questions of importance to builders.

Mr. T. F. Slevin gave evidence on behalf of the Plaintiff.

For plaintiff, Mr. J. Hynes, B.L., instructed by Mr. T. W. Delany, Longford; for defendant, Mr. George Kelly, B.L., instructed by Mr. P. MacDermott Boyle.

As the case is still *sub-judice*, we defer further particulars or comment.

We understand that an important Light and Air case, also involving a question of Vibration, caused by machinery, will shortly be tried in Dublin. Messrs. George Sheridan, A.R.I.B.A., and Cecil Orr, F.S.I., A.R.I.B.A., have been retained as Expert Witnesses on behalf of the plaintiff.

O'BRIEN v. SWITZER.

This action, brought by the proprietors of the Wicklow Hotel, Dublin, against Messrs. Switzer and Co., for loss of Light and Air, came before the Vice-Chancellor in the course of the week. By consent, an injunction was granted restraining the defendant from proceeding with building operations, pending the trial of an action for damages before a jury.

CONTRACTS.

TENDERS received on May 29th, 1899, by the *Enniskillen Urban District Council* for lighting the *New Town Hall*, both Electrically and Gas.

A. SCOTT & SON,  
*Architects.*

ELECTRICALLY.

John King, Ltd., Liverpool	£	1428	s.	0	d.
Laing, Wharton & Down, London	1012	0	0		
Porte, Sykes & Co., Dublin	957	0	0		
Egan & Tatlow, "	870	0	0		
Handley & Shanks, "	833	0	0		
W. H. Drennan, Belfast	806	5	0		
M'Auley, Clarke & M'Laren, Glasgow	751	0	0		
Smith & Parkes, Belfast	745	10	0		
Dobson & Curtis Bros., Dublin	737	8	0		
Wm. Coates & Son, Belfast	640	0	0		

GAS.

S. Crawford, Enniskillen	£	395	s.	0	d.
Jno. Leman & Son, "	350	0	0		
Dobson & Curtis Bros., Dublin	315	0	0		

S. LAWRENCE CHURCH, WINSLOW.

Tenders for Oak Seating in Nave and Aisles.

J. OLDRID SCOTT, Esq., F.S.A.,  
*Architect,*  
Spring Gardens, London, S.W.

Webster & Cannon, Aylesbury	£	458	s.	0	d.
Matthews Bros., Winslow	465	0	0		
Harry Hems & Sons, Exeter	510	0	0		
Robinson, London	658	0	0		

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in.
Clerk of Works	South Shields S.B.	£450 p.a.	June 13
Clerk of Works	Beckingham U.D.C.	£414 & £512 p.a.	June 19
Surveyor	Bernardsey V.C.	£500 p.a. min. £600 p.a. max.	June 21

COMPETITION

Nature of Work.	By whom Advertised.	Premiums.	Designs to be delivered.
Isolation Hospital	Wharfedale Union Hos. Com.	£30 and £15 s.	Sept.

## NOTICES.

WE are compelled to hold over to our next issue the articles on "The Lesser Castles of the County of Dublin."

WE regret we are obliged to hold over to our next issue, the serial instalment of our articles on the History of St. Wolstans.

## EXHIBITION OF PRIZE DRAWINGS.

THE Prize Drawings of the R.I.B.A. will be on view from Monday the 19th to Saturday the 24th inclusive, at 20 Lincoln Place, Dublin. We take it that, as usual, the exhibition will, by permission of the Council, be open to all members of the Association.

WE note that at a recent meeting of the Royal Institute of British Architects, Messrs. G. C. Ashlin, Walter G. Doolin, M.A.; W. Kaye-Parry, M.A.; Frederick Batchelor and C. A. Owen were elected Fellows. These gentlemen are the first from Ireland elected under the new regulations.

At the Templemore Petty Sessions six summonses, at the suit of ratepayers, came on for hearing against Mr. Bracken, each summons claiming a penalty of £50. The cause of action set forth is that Mr. Bracken sat as Chairman of the Urban Council, and voted at a time when he was by law disqualified from doing so, inasmuch as he was a contractor to the old grand jury, and that portion of the roads for which he held the contract have been transferred to the Urban Council. Mr. Bracken applied to have the cases ad-

journed, which they were, for fourteen days. Mr. Bracken is a local building contractor and quarry owner.

The Clogheen Guardians have decided that a new scheme for labourers' cottages be made, and that the full statute acre be attached to each cottage, and that an additional half-acre be given to existing cottages and plots where applied for, the tenants paying expenses; and that immediate steps be taken to procure a reduction of the rents of cottages where the additional half acre is not sought.

With reference to proposals to reduce the rents of labourers' cottages, the Local Government Board has written to the Castlecomer Rural District Council that the Council, before considering this proposal, would do well to obtain a return from their clerk setting forth the following particulars:—(1) Number of cottages provided in the district. (2) Total cost including purchase of land and incidental expenses. (3) Annual charge in respect of loans. (4) Rents of plots taken on lease. (5) Average yearly expenditure for repairs, insurance, etc. (6) Total yearly rental of cottages and plots. (7) Deficit falling annually on the ratepayers.

The South Tipperary County Council had under consideration at their last meeting the tenders for the various roads in the district. Only 14 of the 23 roads were tendered for. It was decided to leave the other 9 out of contract. A contractor, who was lowest for the Cahir road, declined to accept the contract if the clauses in the specification—about steam-rolling the road, and the County Surveyor putting two surface men of his own at a charge of 13s. a week each to the contractor—were insisted on. The clerk said they could not alter the specification now. On behalf

of the County Surveyor it was explained that as the old specification requiring the contractor to keep a surface man was not acted on, he desired to put the clause in the new contracts. The principle was at work in other places.

## "ULSTER JOURNAL OF ARCHÆOLOGY."

THE May number of this most interesting journal is well worthy of careful perusal. Amongst other most attractive features it contains a highly instructive and brightly written article by Francois Joseph Bigger, M.R.I.A., on "The Irish in Rome in the Seventh Century." This article alone should ensure a large circulation for this number, being beautifully and copiously illustrated. Amidst the large number of other items worthy of consideration is a "History of the Colville Family in Ulster," by John M. Dickson; a "History of the Parish of Derrykeighan (County Antrim)," for three centuries, by Thomas Camac, and a continuation of the delightful series of "Personal Recollections of the Beginning of the Century," by Thomas M'Tear.

This month's "Studio" is as full of interest as ever. It is certainly a wonderful shilling's worth. The frontispiece is a reproduction of a particularly dainty water colour "The Violinist," by Kate Cameron. An article descriptive of a music room designed by Fritz Erler, is interesting as telling us something of the work of one of the modern school of German decorative artists. The fittings and furniture illustrated are distinctly original. Altogether we strongly recommend the number to our readers; particularly the art student who will find in it much that is engrossing.

The *Architectural Review* continues the "Academy Architecture" Supplement, and the paper generally is more than up to its usual high standard.

## To Builders, County Surveyors, Contractors, Millowners, Engineers, &amp;c.

THE above can be supplied with every description of IRONMONGERY, including KITCHEN RANGES, GRATES STOVES, GUTTERS and PIPES, ROOFING IRON, also SPADES, SHOVELS, CHAINS, AXLES, SPRINGS, and all kinds of DRAINING, QUARRY, and FARM TOOLS, at

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6, 7, 8, 10 & 11 St. Frederick St. " } R. C. GATCHELL & SON.

Heating by Hot Water, Hot Air, and Steam Apparatus.

## ANNOUNCEMENT.

WE have the pleasure, with this issue, to submit the first of our promised improvements, namely, the tinted cover in which this present number appears. We trust this innovation will commend itself to our readers, as adding to the usefulness and attractiveness of the paper. In our last number we introduced short articles and paragraphs on current matters of interest affecting the Architectural profession and the Building and allied trades.

## OUR LONDON LETTER.

WE are also glad to include the first letter from our London Correspondent. Owing to the restrictions imposed by our very limited space we have been most reluctantly forced to delete an amount of interesting news and remarks from the letter; but with the early prospect of a permanent enlargement of the paper, we look forward to supplying our readers with a full and bright London letter every issue. We are making arrangements with correspondents to keep us supplied with news from other of the more important centres. Particulars will appear in due course. We are also in communication with a well-known London Architect with a view to securing a series of illustrated articles.

## CONTRACTS, TENDERS, Etc.

WE publish a short list of some of the contracts open, and tenders sent in in Ireland. When our arrangements are better settled in detail we anticipate keeping this column accurate, complete, and up-to-date in every issue. We trust our readers will assist us by communicating matters of interest, and information respecting works in contemplation or decided upon, so as to help us in making the journal of general interest and utility.

## CORRESPONDENCE.

WE invite correspondence on general questions relating to Building, Archaeology, Arts and Crafts, etc. We shall also be pleased to have Notes and Queries from Students.

## ECCLESIOLOGICAL NOTES.

WE purpose making a special feature of Notes and Articles on Ecclesiastical Art—modern work in progress or contemplation—articles on Medieval and Contemporary Art, etc.

## THE IRISH BUILDER.

VOL. XLI.—No. 947.

THE recent elections at the Royal Institute of British Architects have resulted in the selection of Mr. William Emerson as President, with a Council which includes some of the foremost names of the profession. Elsewhere in our columns we give a short sketch of the new President. We think the selection is one which does credit to the Institute. Mr. William Emerson's is a name which has of late years, perhaps, not been so prominently before the public as many others that may be readily brought to mind, yet we think the Institute could hardly have made a wiser selection.

But the recent elections are remarkable for two things which afford food for reflection to all who have at heart the interests of the profession as a whole—that is, taking the expression in its widest and most catholic sense; not as confining the profession of Architecture within the bounds circumscribed by the, after all, narrow limits of the R.I.B.A.

The matters to which we refer are, first, the selection of Mr. Bodley as the Royal Gold Medallist; and secondly, the debate which ensued on the announcement of the poll for the election of Members of Council, and of the various Committees, to whom interests of such vital importance to the profession are committed.

We take leave to say, that in honouring Bodley as an architect, the Institute has honoured itself. The Queen's Gold Medal is annually awarded on the recommendation of the Council, to the man who, in their opinion, has done most to advance the cause of the art of Architecture. To the credit of the Council, be it said, this privilege has, to our mind, never been abused. The voice of the Council has always gone to the honouring of a man who, in his turn, and playing his part on the stage of life, has done those things that best entitle him to the commendation of his fellows.

The honour has never been conferred in a narrow spirit—it has not been confined to the small ring of those in touch and sympathy with Council—on the contrary, the foreigner and the outsider have never been excluded.

The selection of Mr. Bodley this year is a case in point. The present Royal Gold Medallist was one of those who,

numbering amongst them some of the most distinguished names, have consistently held aloof from the R.I.B.A. But this year, at all events, the Council have not suffered themselves to be swayed by any considerations that are politic or born of prejudice. The issue before them was to name the artist most worthy of that honour which it was in their power to confer, and we say that they have fairly discharged themselves of this duty.

Of those still with us few names appeal more to all who value the advancement of the art than does that of Bodley and Garner. The mere mention recalls the long era of the later revival, and the fine and lengthy series of works that to-day, amidst all our craving for realistic originality, our decadent Georgianism, and our latter-day cult of crudeness, still give enjoyment to the senses, and in themselves mark the work of the artist and the master.

To elect George Bodley a Fellow of the Institute, before voting him the medal, the Institute had to humble itself, more or less, to a movement that, we believe, would, a generation or two ago, have scarce been so popular as to-day—the more honour to the Council.

The other matter to which we refer is the declaration of the poll on the announcement of the result of the ballot for Council. The list of successful candidates, as usual, was, in a measure, but a replica of the last. The system adopted must conduce to such a result. In every society that ever existed for any length of time, the members who take a really keen interest in its welfare form but a minority. Hence the natural tendency towards the re-election of an outgoing committee *en bloc*, because it involves the least expenditure of thought and reason. We do not wonder at the agitation of the junior members who raised the discussion. No elective body that remains practically unaltered in formation, time after time, is fulfilling its functions: it cannot possibly conduce to progress; change is the very essence of an elective assembly as opposed to an autocratic rule. The opposition of different lines of thought is essential to true advancement. It is, as it were, imperative, in order to complete the circuit of progress. This does not mean the exclusion of any, but rather the inclusion of many. We note the matter with an added degree of interest, because it follows on the action of some members of our Irish Institute at the two last general meetings. In fact, if it be not heresy to say so, the Anglo-Saxon has taken a leaf out of the Irish book, because it is more

than a year and a-half ago since the very same point was raised at the general meeting of the R.I.A.I. in 1897, and not without subsequent results.

But after all, whatever may be thought at the time of a discussion almost bordering on heat, the ultimate effect must be good. It stimulates interest in the particular society, and if the advocates do not suffer obstinacy to overrule good sense, or to carry them beyond bounds, it finally tends to the advancement and keener appreciation of the interests involved.

### STRIKE IN THE GRANITE QUARRIES.

For some time past Contractors have experienced the utmost possible difficulty in obtaining supplies of stone from the Ballyknocken and Co. Dublin quarries. As a consequence several important buildings in course of erection in the city and neighbourhood are practically at a standstill. At all times during recent years it has been difficult in the extreme to get regular and prompt supplies of granite, and, as a consequence, Portland and Dumfries stone have, to a considerable extent, supplanted granite and the native limestones. It is possible to procure both these English stones with less expenditure of time and temper, than the magnificent granites quarried within a few miles of the city. The quarry masters allege this state of things is due to extravagant conduct and demands of the men. Some time since they demanded an increase of 4/- a week, which was conceded, now there is a demand for a further increase which the masters contend, they cannot, having regard to their own interests, entertain. They further complain of the almost overwhelming difficulty of getting a fair week's work. We understand the masters have not yet determined their course of action.

We do not know what the real merits of this particular case may be, but this we do say, that those responsible for any stoppage of work incur a great responsibility. We have had so many and such grim illustrations of the consequences of strikes in the City of Dublin, that we should have thought that one word to those interested would cause them to pause. The lost trade of the iron foundries is a case in point, and one of the most melancholy instances ever recorded of a flourishing trade being destroyed root and branch in a decade or two. The enormous increase in the use of terra-cotta throughout England, and in particular the Midlands, is to a large extent due to

the impossibility of continuing to use stone at a profit.

With all the advantages of a fine, easily worked stone close to hand, terra-cotta has in many districts completely superseded stone. This is no question of taste or fashion, for we cannot believe that any architect would willingly chose terra-cotta if he could get sound stone at a fair price—unless he were building in the poisonous atmosphere of a large manufacturing town. We could cite many like instances, even in our own city. We do not wish to go closely into this question of relative merit as between masters and men, but it seems to us that the stone cutters of Dublin have by their arbitrary conduct in many instances of late years, been sharpening a keen-edged knife for cutting their own throats, as they may one day find to their cost, when the trade has flown for ever. They may have the poor satisfaction of beggaring the masters, but what would their own case be? We cannot believe that any intelligent body of men like the stone cutters trade, would allow such a spirit to influence their action. We put it, is it not to their ultimate advantage that they should co-operate in building up the trade as a whole, strengthening the hands of those who would wish to encourage the use of a local material, instead of making themselves a party to a course of action which inevitably goes to making the cost of production prohibitive?

THE German Government seeks to deal with this question of strikes in a drastic manner. His Imperial Majesty, the Emperor, utters the behest "thou shalt not"—whether His Majesty will find himself deceived, mistaken in his estimate of his strength, and discover that though there may be plenty of brass in his composition, yet his feet are of clay—very clay—after all, or like another Canute, find himself unequal to the task of stemming a rising tide, we cannot tell.

But when we consider the measures which the Government of a democratic and representative monarchy finds itself forced to take, we must reflect that the relations of labour and capital to-day, have reached a dangerously high degree of pressure with no safety valve in sight.

Elsewhere in our columns we print a report setting forth a certain new code of laws governing the punishment of all inciting either to strikes or lock-outs. Punishments up to five years hard labour are tabulated.

It is surely folly to talk of punishing

those who interfere to influence the rates of wages. A man will not only sell his labour in the highest market he can get, and none may prevent him doing so, but he will force the hand of those who need his services if he can—the laws of supply and demand notwithstanding.

THE dentists the vets., the stockbrokers, and last of all, the chartered accountants, have all registered after statutory examination. Why should the Architects seek to emulate the barristers as a mere dinner-eating profession without any educational test whatever?

A University Degree has been called a hall mark of a certain sort, although the article might be genuine without it. Why should not the die of our hall mark strike deep enough and distinct enough that no mere ignorant Lord Justice or Parliamentary Commissioner dare question its genuineness or its authority?

We certainly agree with the President of the Architectural Association that the letters P.A. convey a positive professional status; this nobody can deny, and it is for this very status, and what it conveys, the magic letters are so eagerly coveted.

What a plague is that word, taste—this cant about arts and crafts. Why, were it not for Welby Pugin art-craftsmanship would not exist amongst us. The very trade of stone masonry was extinct and buried in the slough of Georgian "taste" and Court patronage.

Other times other ways we can look back to Robert de Montreux brought on an extended A. A. excursion to Egypt and the Holy Land—unfortunately, his notes went to feed the cassowaries.

That our own great architect—the Gobhan Seer—became King of Abyssinia no one may doubt. We nearly forgot him, or meant to have left him in baulk for this night only.

Then we have Villars de Kounecom's Sketchbook forthcoming in England—adaptation and correspondence with his friend, Pierre de Corbie, of Rheims.

Are we sorry to hear our friend Villars afterwards turned up at Cambrai Cathedral, architect in charge of the fabric, and later that he found employment in distant Hungary?

Cuvin Von Steinbach's house stands to this day an incorporate part of his Cathedral of Strasburg, while his effigy adorns the principal door, a young lady named Sabrina holding his square and compass. Possibly, she pre-figured the lady type-writer of our day.

Contracts for the fees and expenses of architects making distant inspections exist still. For instance, the Chapter of the Cathedral of Gerona (in Spain) decided to employ Henry de Narbonne on such times as no architect would deem it well to dispose. After this, previous to the Renaissance, many of the nobbs thought it well

to display their taste in their castles, mansions, etc., and did so by applying to the heads of the trades' guilds and carry out their works on their own special hook. Such was aristocratic patronage at all times until the Renaissance came, when my lord employed a pet painter, who generally made on a small scale something like the utter mess that colossal fraud, M. Angelo, made of the dome of St. Peter's. I have small quarrel with these men; they followed the manners of their time, honestly copped what they deemed good and authentic in the antique, and daringly gave it as their own.

But when eclecticism begot "Rococo"—style Louis Quatorze—and that of the later Georgian period, no wonder stagnation supervened, and no ray of light appeared until Pugin the Great showed, in the noblest palace of the whole world—Westminster—the true relation of the artist-craftsman with the Architect, and showed, too, who was master; trained every tradesman on the works, from the blacksmith to the sculptor, from the tiler to the glass painter: and sorry, indeed, would be the plight of the art-craftsman of this day were it not for that glorious Renaissance.

An Architect, however, is no mere artist. [Tonsorial, sartorial, sontorial, or photographic.]

The art of gaining a practice plunges the successful practitioner into the meshes of one of the most arduous of all professions worthy of such a title.

#### THE POSITION OF THE COUNTY SURVEYORS.

THE Local Government Board has written to the Derry County Council, stating that under the Grand Jury Acts the maximum salary of the County Surveyor was fixed at £600. The Board, in the absence of any reason for reduction, feel themselves unable to concur in the proposal of the Council to fix the salary at £250. The Local Government Board consider the sum would not be sufficient, when account is taken of the large outlay which the surveyor must incur in respect of travelling expenses if the duties of his office are properly fulfilled. After discussions and divisions the Council fixed the salary at £350.

The position of the County Surveyors appears to have undergone a considerable change under the Local Government Act. The surprise in the working of the whole Act is the desire for economy, not to say parsimony, manifested by the new Boards, thus justifying Mr. Balfour's prediction. We are entirely with the L.G.B. in their very proper enforcement of a fair salary. The duties of a County Surveyor are so varied and so responsible that it is plainly to the interest of the county to secure the services of men of capacity and standing in their profession. The system under which the surveyors have been appointed has worked well in the past, and has resulted in the formation of a body of officials educated and admirably qualified for the discharge of their important duties. To tamper with the existing arrangements will prove dangerous, and must result in an all-round lowering of status, educational and personal. Do the County Councils imagine that cutting down the salaries by one-half will tend to attract the best class of men and induce them to submit to a severe competitive examination? the County Surveyors' assistants are at present an underpaid body. It

would be better for the Councils to enquire how they can improve the position of this class of their officials, in order to increase the general efficiency, instead of effecting false economy. There is one other consideration that occurs to us in this connection, and that is the present unsatisfactory system by which the County Surveyors engage largely in private work practising as architects. It is not fair to the profession of architects, nor to the ratepayers, who pay a liberal salary. The responsibilities of an average County Surveyor are, in themselves, if faithfully discharged, quite sufficient to engage the unremitting attention of any ordinary man. The County Surveyors are not architects, and seldom have received a training as such, their course of study being, as a rule, purely of an engineering character, directed towards the successful passing of a competitive examination—very severe and far-reaching it is true. nor is the experience subsequently gained in the discharge of the duties of their office calculated to equip them for grappling with the important considerations of practical and æsthetic detail and design that arise in every domestic and ecclesiastical work of any importance. Neither does it conduce to the dignity of any County Council or public Board that their highly-salaried and responsible officials should be engaged in seeking for commissions outside the public service, especially when such work is of a character which usage and commonsense have allotted to architects. By all means let the Councils pay their officials sufficiently, and even liberally—the ratepayers will receive full value for every penny of the money, but to lower the existing salaries is surely, from every point of view, a retrogressive movement.

THE collection of art exhibits at the Science and Art Museum has recently been added to, and includes two interesting and elaborate last century state coaches, one having been the carriage of the famous John Fitzgibbon, Lord Clare, Chancellor of Ireland, and the most active promoter of the Union. Both vehicles are very interesting as elaborate examples of the coachbuilder's art of a bye-gone day. A large Georgian carved wardrobe or press has also been acquired, and a model of a room at Rokeby Hall has been set up. It has a chimney piece, wainscoting, and panelled ceiling. It is a typical interior of an English manor.

The Museum now contains quite a wealth of examples of work valuable to the Architectural student, for which we have chiefly to thank the present active and courteous Director, Colonel Plunkett, R.E.

The Committee of the Architectural Association endeavoured to promote a class for study in the Museum, but we are sorry to say the students have not supported them in their effort. It is difficult to account for the enervation which seems to pervade the younger section of the Architectural Community in Dublin. They seem to set no value on opportunities of study. Another recent addition to the Museum includes working drawings of machinery (engines), amongst them a perspective drawing, entitled—"A Design for a Country House,"—a poor drawing for a poorer house—and a

design for a "Villa," presumably a draftsman's and design exhibit. A corresponding remarks of the one attribute "vile," and of the other "villainous."

It seems a pity that when the Department does acquire such an exhibit that a little more discrimination is not exercised. At the present day there is no lack of skill in draftsmanship, or in the design of the small house, and nothing could be easier than to procure sheaves of good work, fit examples for the student.

There are some other interesting additions.

The fine pair of richly-chased brass guns from the Sutlej Campaign, lent by Lord Gough, have been relegated to the portico.

#### THE EXHIBITION OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS' PRIZE DRAWINGS.

THE exhibition of prize drawings commenced on Monday, 19th June, and remained open during the week, at the R.I.A.I. Rooms, Lincoln Place.

The collection is far and away the best that has yet been sent to Dublin. As examples of Architectural draughtmanship, it would be hard to beat them. The measured work all shows evidence of great care and study. The prospective work, with the exception of Red Rose's Interior of a "Royal Mausoleum," is weak. This design which has been awarded the "Tite" prize, has considerable merit. The application of the detail is pleasing and refined. The drawing of the exterior is too affected in manner to be satisfactory. There is a good show for the "Owen Jones," which during the past couple of years seems to have attracted the attention of the students. Mr. John Stewart has some very careful and nicely coloured drawings of the decoration at the Convents in San Marco, Florence; the Capella Palatina Palermo, and San Anastasia, Verona.

Two measured drawings of the N. and W. porches at Chartres—one in particular is an exceptionally fine piece of brush work. For the "Tite" prize, Petronius sends a nice set of drawings, but poor and pretentious design. The detail elevation of the Mausoleum, conveys the impression of a palatial Music Hall or Casino, on which the *Requiescat in Pace* inscribed on the front looks like a joke, reminding one of the inappropriate platitudes formerly inscribed over the Wellington Barracks: "Cease to do evil, and learn to do well." But in this case there was the excuse that the place had once been a prison, but certainly Petronius' Palace is not the place to *requiescat in pace*; but then people's notions of *peace* do differ.

"Ben Marcato's" design for a Concert Hall (awarded the Sloane Medallion and £100), is a stately but common place, and in many ways defective, composition.

There are some neat drawings of Southwold Church—drawings by "Non vi Sed Salpe." Nice sets of measured work of St. Mary Magdalene, Oxford, H. J. Triggs; and of Kirby Hall, A. Herbert.

For the "Pugin Studentship." There is for this prize, to our mind perhaps, the most satisfactory exhibit in the room. Some really fine coloured sheets of decoration and stained glass from Ranworth

Weekly and Ely, and measured drawings of the Easter Sepulchre, Hanton, by Newart, by Rutherford. The freehand drawings are masterly.

Architectural sketches in Worcestershire and North Hants, by A. Herbert, are good and free.

Mr. H. J. Trigg's successful design for a Golf Club House is unconventional, simple, and rather pleasing. But we should like to know where the author purposes getting his grass-green masonry, and chocolate tiles, but we suppose the masonry is a compliment to "The Emerald Isle."

Mr. H. James' design for "a small house," is sensible, simple, and thoroughly well worked out.

Many of the drawings give evidence of an amount of painstaking, care, and infinite care, but whether the result is commensurate is open to question. The tendency of the day is to over-elaborate draughtmanship—to deify it, to the injury of design—and there are not wanting signs of a revolt against what many look upon as a baneful influence.

Altogether the collection is of a very high order, and we trust no student in Dublin has missed the opportunity of seeing it.

#### THE ARCHITECTURAL ASSOCIATION OF IRELAND.

THE Association will hold the Annual Excursion at Chester this year. The party will leave by the evening boat from the North Wall, on Friday, 30th June, spending the entire day in Chester on Saturday. The Association Dinner will take place at the "Green Dragon," on Saturday evening, after which the members will leave Chester to catch the boat arriving in Dublin on Sunday morning.

In this connection, the following remarks of an architect contained in a letter addressed to our contemporary, the *British Architect*, will be of interest:—

"I was at—the other day, and took the opportunity of seeing Chester on the way. Anything so beautiful and entirely in keeping with the best examples of ancient domestic work than Mr. John Douglas's, St. Werburgh Street, I have never seen. It is so daringly elaborate, and yet absolutely satisfying; and I should imagine there is no modern street in existence that can compare with it in any way. I saw other work of his, equally charming, around and about Chester. The Chester people, I was glad to find, fully appreciate all he has done to maintain the traditions of the city, and are rightly proud of him and his work."

Speaking for ourselves, Mr. Douglas's work has always struck us as possessing that indefinable quality of 'style,' so inherent in old work, and so lacking in new. We have at all times shared the enthusiasm of the writer, and whenever we looked at the work, the thought came into our mind—"how good it is, almost like the old work, but better than some."

We hope to publish in our next issue, a full report, with illustrations, of the excursion.

The Cycling and Camera Club held

their first run for the season, on Saturday, 17th June. The attendance was small, and included the president. The party visited Oldbawn, near Tallaght, for the purpose of viewing a house described as "Elizabethan." Some considerable difficulty was experienced in finding the *locus in quo*, which is reached by a lane off the road leading from Tallaght to Bohernabreena. The members were most agreeably surprised by the interesting character of the old house. It is not too much to say that it is an absolutely unique example in Ireland. Probably not another house of the period is to be found so perfect. Raleigh's house at Youghal, is probably older, but much inferior in preservation and structural interest. There is little to identify the place with the Elizabethan period, the probability is in favour of the late Jacobean.

The exterior is a picturesque gabled house, showing evidence of the former existence of large mullioned window-ops, since filled with sashes. A small Doric portico, rather coarse in detail of early Georgian date, forms the principal entrance. The hall is a large, low apartment, with a most interesting Jacobean fireplace, carved with the arms of the Bulkeley family. The ceilings are traversed by carved beams. The most interesting room, however, is the drawing-room opening off the hall, and looking out over what was once, in all probability, a most delightful old formal garden. This room is similar to the hall, but the fireplace is more interesting, the over-mantel has a conventional representation, supposed to depict the siege of Jerusalem, and has the Arms of the See of Dublin carved on it, with the date, 1641. It is generally supposed that the house was the residence of an Archbishop Bulkeley, but we believe this is incorrect. There is better reason to suppose that the place was about this date, occupied by a son of Archdeacon Bulkeley, and never was an Episcopal residence. Like most places of the kind, Oldbawn House boasts its ghost. The staircase is a rather elaborate open-well staircase of the period. We believe Mr. Thomas Drew, R.H.A., has made complete measured drawings of it.

The Georgian joinery is the delicate and refined of the detail.

The chief apartment upstairs is a long narrow hall, once, probably a picture gallery, or ball-room. It is much dilapidated, but the large mullioned window-ops are still there, and the position of the great fireplace, since built up, may be traced. The stables form a picturesque group of buildings.

It is a matter for regret, that such a fine example of the work of this period is not better known and appreciated. The premises were formerly used as paper mills, but like so many of our once flourishing industries, in and around Dublin, the trade declined, and for the past fourteen years, the house has been unoccupied.

THE President of the Architectural Association of Ireland for 1899-1900 is Mr. George P. Sheridan.

Mr. Sheridan entered the profession in the year 1880, being apprenticed to Mr. J. Hargrave-Bridgford, with whom he served three years, subsequently going to

the offices of the late Mr. Wm. Hague, and afterwards to Mr. Walter G. Doolin, M.A., and Mr. J. J. O'Callaghan, F.R.I.A.I. Some time later he proceeded to London with the object of benefiting himself in the study of his profession by gaining that experience which is, perhaps, more readily to be obtained in a large London office. He entered the offices of Mr. W. W. Gwyther, F.R.I.B.A., and Mr. T. W. Aldwinckle, F.R.I.B.A. Soon after going to London Mr. Sheridan became a member of the Architectural Association, and fully availed himself of all its privileges of study. In 1894 he passed the necessary examinations and became a member of the R.I.B.A. Mr. Sheridan returned to Dublin to take up the practice of the firm now known as Morley & Sheridan.

At the time of the starting of the Architectural Association of Ireland in 1896, Mr. Sheridan, (although not a member of the original formation committee), took a warm interest in the project. He was shortly afterwards co-opted to the committee, proving himself one of its most zealous and active members. He was chosen vice-president last year, and has now been elected by the members as their president for the current session. Mr. Sheridan succeeds Mr. J. Howard Pentland, R.H.A., in the chair, who, following on the record of Mr. R. Caulfield Orpen, leaves no slight task to the successor who has to follow in his steps.

WE understand the Bye-laws of the Royal Institute of the Architects of Ireland have been revised and amended by the Council, and will shortly be submitted to a general meeting of the members.

In the latest project for a new Barrack Scheme, the War Department have decided upon arranging the plan so as to give each man a private sleeping apartment. It is a reform which, sanitorially and many other grounds, is to be welcomed. The present barrack room system hardly conduces either to give the best conditions of health or to inculcate that self respect in the private soldier which so many of the present generation of officers are seeking to give effect to. As our readers are probably aware, barrack rooms are used for living and sleeping in (a state of things now universally condemned by sanitarians). Every barrack room is in charge of a corporal; and the only merit besides doubtful economy that the old system has is one of discipline, order being, of course more easily maintained.

A SPECIAL meeting of the Dundalk Urban District Council was held to consider the loans proposed to be applied for various purposes, including artisans' dwellings, sewerage, new water main, free library, etc., etc. The total estimated for under all heads was £27,000. The Town Clerk informed the Council that the available margin of borrowing powers was only £20,000. It was decided to go for the following items:—Housing scheme, £17,000; purchasing and fitting grammar school for new free library, etc., £1,400; town hall alterations, £800; markets and meat stalls, £650. The proposal to lay a new water main (estimated at £3,500) from the reservoirs to the town was rejected by 9 votes to 4.

In Mount Stuart, the most princely of his three Scottish seats, the Marquis of Bute possesses the most magnificent private house in Great Britain, and probably in Europe; money has been lavished on it. Its stately hall is of alabaster, and its grand staircase of the most exquisite Carrara marble. Its dining-room has room for nearly 304 guests; and a quarter of a million has been spent on the picture galleries and libraries.

## CLONAKENNY CHURCH.

THE new R.C. Church at Clonakenny was consecrated with great ceremony on Sunday, 18th June, by the Most Revd. D. MacRedmond, Bishop of Killaloe.

The church is designed in a free Romanesque style, and is from the designs of Mr. Walter G. Doolin, M.A., F.R.I.B.A., Dublin. The contractors were Messrs. John Sisk and Sons, Cork.

# ANNALS OF MONKSTOWN AND SOME NEIGHBOURING PARISHES IN THE COUNTY OF DUBLIN.

BY FRANCIS ELDRINGTON BALL, M.R.I.A.,  
F.R.S.A.I.

## CHAPTER III.

A.M. 3501 TO A.D. 1225.

A.M. 3501. A dun or fort was erected on Dalkey Island (Deilginusi in the territory of Cualann) by Sedgha, a Milesian chieftain. *Annals of the Four Masters*.

A.D. 432. St. Patrick landed in the territory of Cualann near where the town of Wicklow now stands. See Stokes's *Ireland and the Celtic Church*, p. 52, also for description of the country of Cualann, Orpen's *Song of Dermot and the Earl*, p. 325.

450. A dun was erected where Kingstown now stands by Leaghaire, son of Niall of the Nine Hostages, King of Ireland, and from it the old name of Kingstown, Dunleary, or Leaghaire's Dun was derived. Joyce's *Irish Names of Places*, p. 130.

500. A monastery was established on the site of the ruined church of Tully, or Tolach na escob, the hill of the bishops as it was called, near Carrickmines. In the *Life of St. Bridgit*, to whom the church of Tully was dedicated, it is recorded that eight bishops or charepiscopi came from there to her home in the County Kildare to see her, and that in response to her prayers refreshment was miraculously provided for them. See O'Hanlon's *Lives of the Irish Saints*, vol. ii., p. 144. The erection of Tully church has been ascribed to St. Tullock or Olave, but, as Dr. Todd has shown, the statement is without any foundation. See *The Obits and Martyrology of Christ Church*, p. lxxxiii., note c.

600. The holy daughters of Leinin, St. Fintan, priest of Clonkeen, the virgin St. Begnita, and St. Mochonna, to whom the churches of Killiney, Kill-of-the-Grange, Dalkey, and Monkstown were respectively dedicated, probably flourished in the sixth or seventh century. See O'Hanlon's *Lives of the Irish Saints*, vol. i., p. 92., for a notice of St. Mochonna, vol. ii., p. 399, for one of St. Fintan, and vol. iii., p. 196, for one of the daughters of Leinin, Archdall's *Monasticon Hibernicum*, edited by Moran, vol. ii., p. 1, note 2, *The Obits and Martyrology of Christ Church*, p. xlv., note q. for mention of St. Begnita.

719. Fogartach, son of Niall, King of Ireland, was killed in the battle of Dalkey by Cinaeth, son of Irgalach. *Annals of the Four Masters*.

727. A cow was seen at Dalkey Island, having one head, and one body as far as her shoulders, two bodies from her shoulders hindwards, and two tails. She had six legs, was milked three times each day, and her milk was greater each time. Her milk, and some of the butter made of it, were tasted by many persons. *Ibid.*

817. The Danes, under Aedh Oirnidhe, devastated the territory of Cualann and of Leinster as far as Glendalough. *Ibid.*

938. Coibhdeariach, Abbot of Cillachaidh, was drowned in the sea near Dalkey Island while fleeing from the Danes. *Ibid.*

942. Dublin, then occupied by the Danes,

was totally destroyed by the Irish. The few inhabitants who escaped fled in ships to Dalkey Island. *Ibid.*

1038. The Church of the Holy Trinity, commonly called Christ Church, was founded in Dublin, and soon afterwards became possessed of "a large extent of rich land, which included almost all the present parishes of Tully, Killiney, and Kill." Mills's *Norman Settlement in Leinster* in the *Journal of the Royal Society of Antiquaries of Ireland* for 1894, p. 166.

1139. The Abbey of the Blessed Virgin Mary in Dublin which was founded by Melsachlin, King of Ireland, and MacGillamocholmog, a Leinster chief, became affiliated to the House of Savigny in Normandy, founder under the branch of the Benedictine Order, styled Cistercian. Amongst the possessions of the Abbey were the lands of Carrickbrennan, which stretched along the coast from Dalkey to where Blackrock stands, including the lands on which Kingstown and Bullock are now built. See Gilbert's *Charteraries of St. Mary's Abbey*, p. xv., and Mills's *Norman Settlement in Leinster* in the *Journal of R.S.A.I.* for 1894, pp. 163, 167.

1156. The Abbot and Chapter of Savigny ordained that their house of St. Mary at Dublin should be administered by the Abbots of Buildwas in Shropshire. See Gilbert's *Charteraries of St. Mary's Abbey*, p. xvi.

1163. The Church of the Holy Trinity in Dublin was changed into a Priory of monks, of the order of Arras, a branch of the Augustinians, by Laurence O'Toole, Archbishop of Dublin. Archdall's *Monasticon Hibernicum*.

1171. While Roderick O'Connor, King of Ireland, was besieging Strongbow in Dublin, a portion of his forces under Murtough, prince of Kinsellagh, were encamped at Dalkey. See Orpen's *Dermot and the Earl*, p. 131.

1171. Henry II. confirmed to "the Church of St. Mary at Dublin," and to "the white monks serving God there," all their possessions, including the lands of Carrickbrennan, now Monkstown, and four years later he confirmed them to Ralph, Abbot of Buildwas, and his successors. Gilbert's *Charteraries of St. Mary's Abbey*, vol. i., pp. xviii., xix., 79-83.

1172. About this time Dalkey came into the possession of Hugh de Lacy, Constable of Dublin; Stillorgan into that of Raymond Carew, and Kilmacud into that of Walter de Rideleford, Lord of Bray. For notice of de Lacy see *Dictionary of National Biography*, and for mention of de Rideleford, see *Journal of R.S.A.I.* for 1894, p. 167, and Cockayne's *Complete Peerage*, vol. i., p. xiii.

1176. Hugh de Lacy granted Dalkey with its island to the see of Dublin. D'Alton's *History of the County Dublin*, p. 887.

1178. Lawrence, Archbishop of Dublin, granted to the Priory of the Holy Trinity, *inter alia*, Kill of the Grange (Cluainceoin or Clonkeen), lands near to it, (Talach and Tulachoein), Killiney (Cellingeneheain), Tully (Tillachnaescop), part of Carrickmines (Drumhyng), and Ballyogan (Balle-rochucan). *Christ Church Deed*, No. 364a, cf. also deed executed by the sub-prior of Holy Trinity, exchanging certain lands in North Dublin for *inter alia*, Tully, Dromin, and Ballyogan, in the *Liber Niger*, Bp. Reeves's copy in Library of Trinity College, Dublin, p. 411.

1179. Pope Alexander III., "servant of the servants of God," confirms to Lawrence, Archbishop of Dublin, and his successors, various churches and lands, saving as the mensal of the Canons of Holy Trinity Church, amongst other places, Kill-of-the-Grange, the lands near to it, Killiney, Tully, and Dalkey. Bishop Reeves' *Analysis of the United Diocese of Dublin and Glendalough*.

1185. King John confirmed to St. Mary's Abbey its possessions, including Carrick-

brennan, now Monkstown, with its chapel and tithes. Gilbert's *Charteraries of St. Mary's Abbey*, vol. i., pp. xx, 84-89.

1186. Pope Urban III. confirmed to Holy Trinity Church *inter alia*, Kill of the Grange, with its church, the lands near to it, Killiney, with its church, Tully, with its church, part of Carrickmines and Ballyogan. *Christ Church Deed*, No. 6.

1189. Pope Clement III. confirmed to St. Mary's Abbey, amongst other churches, the chapel of Carrickbrennan, now Monkstown, with the tithes and liberty to present a chaplain. Gilbert's *Charteraries of St. Mary's Abbey*, vol. i., p. xxi.

1200. The Archbishop of Dublin was granted the right to hold a market in Dalkey on Wednesday, and an annual fair on St. Begnita's day, with such tolls and customs as the mayor and bailiffs of Dublin had the right to levy. These were to be spent upon the walls and harbour of the town. D'Alton's *History of the County Dublin*, p. 887.

1202. King John confirmed to Holy Trinity Church, amongst other lands and possessions granted to it before and after the arrival of the English in Ireland, Kill-of-the-Grange given to it by Donagh, son of Donald Grossus; Tully, by Sigrahere, son of Thorkil; part of Carrickmines, by the son of Muirboillan; land near Kill-of-the-Grange, by Gillacriste Macumalyn, and Ballyogan, by Earl Richard. *Christ Church Deed*, No. 364c.

1207. King John confirmed to the convent of Graney, near Castledermot, in the County Kildare, the grants made to it by its founder, Walter de Rideleford, including the church of Kilmacud. Archdall's *Monasticon Hibernicum*, edited by Moran, vol. ii., p. 259, and Sweetman's *Calendar of Documents relating to Ireland*, 1171-1251, p. 53. Kilmacud, which was a sub-denomination of the manor of Thornecastle, now Booterstown, came again, in that century, into the hands of the town, and was given to William le Deveneys. See Mills's *Norman Settlement in Leinster* in the *Journal of the R.S.A.I.* for 1894, p. 167, also for notice of Deveneys, Mr. Lefanu's paper on *The Royal Forest of Glencree*, in the *Journal* for 1893, p. 274.

1216. Raymond Carew granted the church of Stillorgan and land round it called Athnakill, or Acadh-na-Cill, the church fields, to the Priory of the Holy Trinity. Archdall's *Monasticon Hibernicum*, edited by Moran, vol. ii., p. 1, note. Carew also granted, probably at the same time, "the extremity of the land of Stillorgan towards the sea, known as Argortin," or the ploughed lands, to St. Mary's Abbey. See Gilbert's *Charteraries of St. Mary's Abbey*, vol. i., p. iii., and Mills's *Norman Settlement in Leinster*, in *Journal of R.S.A.I.* for 1894, p. 167.

1218. Reginald Talbot was seized of land at Dalkey, rendering therefore a goshawk annually. D'Alton's *History of the County Dublin*, p. 887. The goshawk was the largest bird used in falconry except the Ger-Falcon. Irish hawks were greatly prized, and were of much value. See paper by Mr. John P. Prendergast on *Hawks and Hawks in Ireland* in the *Transactions of the Kilkenny Archaeological Society*, vol. ii., p. 141. Gaskin. (*Irish Varieties*, p. 277) says that goshawks were found at Bullock in the eighteenth century.

1219. The church of Kill-of-the-Grange, although granted by the Archbishop of Dublin, and confirmed by the Pope to the Church of the Holy Trinity, formed at this time a prebend in what was then the collegiate church of St. Patrick. The latter was, in this year, constituted by Henry de Loundres, Archbishop of Dublin, a cathedral, and Ralph de Bristol who was then the prebendary of Clonkeen, or Kill-of-the-Grange, was made the first Treasurer, and given the church of Kill of the Grange, and its subsidiary chapels, as portion of his corps. The prebend of Clonkeen was

valued at 40 marks, and the Treasurer had also land near Carrickmines called "Tackkerig," which was valued, in 1306, at £6. In 1220 the Pope issued a mandate to the Abbott of St. Thomas's and to the Priors of All Saint's and St. John's, to hear a claim made by Treasurer Ralph, or as he is called in the mandate, Radulph, to the tithes of land which belonged to Radulph de St. Fagan, close to the grange of Monkstown, and also to the tithes of the grange of Monkstown, so far as legally belonged to his churches of Kill-of-the-Grange and Dalkey. A compromise was effected under which the abbot and monks of St. Mary's Abbey undertook to pay Ralph half a mark of silver each year, and five marks for his legal expenses. In 1223 Ralph was made Bishop of Kildare. He is said to have repaired and beautified the cathedral of that diocese, and to have died in 1232. Archbishop Luke, who held the see of Dublin from 1228 to 1255, substituted Ballymore for Kill-of-the-Grange, as portion of the corps of the Treasurer of St. Patrick's, and Kill-of-the-Grange became the sole property of Holy Trinity Church. See Mason's *History of St. Patrick's Cathedral*, pp. 40, lxix; Cotton's *Festi Ecclesiæ Hibernicæ*, vol. ii., pp. 121, 189; Gilbert's *Charteraries of St. Mary's Abbey*, vol. i., p. 189; D'Alton's *History of the Co. Dublin*, p. 932.

(To be continued.)

#### NOTICE.

WE are compelled to defer to our next issue the concluding portion of Mr. Macey's paper on "Specifications."

We regret that our esteemed correspondent, Mr. C. E. Dix, M.R.I.A., will be unable to continue his articles on "The Lesser Castles of the County Dublin" until the 1st August.

THE German Government have endeavoured to hit upon a method of dealing with Trade Unions and preventing strikes and lock-outs. The measure provides that anyone who attempts, by physical force, threats, defamation, or boycott, to induce employers or employed to join or not to join unions, or become parties to agreements, the object of which is to influence the conditions of labour or wages, shall be liable to imprisonment not exceeding one year, or, in case of extenuating circumstances, to a fine not exceeding 1,000 marks. The same penalty shall be incurred by anyone who attempts by the same methods to forcibly bring about the dismissal or rejection of workmen and the stoppage or refusal of work for the purposes of a lock-out or strike. The same shall apply to anyone who threatens or boycotts workers not taking part in a strike or lock-out on account of their holding aloof from such a movement. Persons taking part in riotous public assemblages at which any of the above-mentioned acts may have been committed shall be liable to imprisonment. Should, in consequence of the yielding disposition of the parties approached, a strike or lock-out have been forcibly brought about, or should, from the same cause, the security of the Empire or of a Federal State have been jeopardized or life and property shall become endangered, the penalty shall be hard labour not exceeding three years, except in the case of the ringleaders, for whom the maximum penalty shall be five years.

#### HISTORY OF ST. WOLSTAN'S.

(Continued from page 59.)

##### FAMILY OF ALLEN.

NICHOLAS ALLEN, of St. Wolstan's, fourth son of John Allen, of St. Wolstan's (67, his wife, Anne Dillon. See IRISH BUILDER for 1st June, ult.) succeeded his nephew, John Allen. He wedded *da.* of Gerald Allen, by whom he had an only son.

JAMES ALLEN, of St. Wolstan's, one of the Irish Loyalists who signed "the Faithful and Humble Remonstrance of the Roman Catholic Nobility and Gentry of Ireland," which they presented to King Charles II. on his Restoration in 1662, setting forth "the prodigious afflictions under which the Monarchy of Great Britain had before your Majesty's happy Restoration these twenty years." His estates were sought to be confiscated by the Cromwellians; but St. Wolstan's was saved at the Restoration by a "Decree of Innocence" which he and Lady Allen (widow of Sir Thomas Allen, Bart.) had from the Court of Claims and Distributions in 1662. The Commissioners of the Court of Claims granted St. Wolstan's to Hugh, 3rd Viscount Montgomery, a gallant Royalist during the period of the Civil Wars in Ireland, and, consequently, a severe sufferer in those times of confiscation and oppression. He survived, however, and after the Restoration he was created, in 1661, EARL OF MOUNT ALEXANDER, of Ardes, in the county of Down; but James Allen eventually succeeded in obtaining a "Decree of Innocence," and thereby saved his property (see IRISH BUILDER for 1st April, 1899).

JAMES ALLEN *m.* Aminet, *da.* of Patrick Barnwall, of Crickstown, county of Meath, by whom he had a son.

PATRICK ALLEN, of St. Wolstan's, who raised at his own expense a body of troops for James II., under whom he served as Major-General; but, being comprehended in the Articles of Limerick in 1691, his property was thereby preserved. He *m.* (1st) Mary, *da.* of John Browne, Esq., of Castle Browne, county of Kildare, by whom he had issue four sons and 3 *da.*s, viz.:—

I. John, who joined his father in a Deed, 1736, and died 22nd August, 1741, leaving issue a son, William, stated to be the eldest son in an Equity Bill, on which a decree was issued 28th June, 1743\*? and three *da.*s: (1) Catherine, of St. Wolstan's, who *d. unm.* in 1750 (Will dated 17 Feb., 174½; pr. 7 April, 1750, see below); (2) Tipper; (3) Margaret.

II. Francis, who conformed to the Protestant religion in 1709; was chosen to Parliament for the county of Kildare in 1721. He *m.* Frances, only *da.* of Charles Whyte, Esq., of Leixlip Castle (marriage settlement dated 4 Sept., 1703), by whom he had issue five sons and one *da.* :

(I.) William, who became Carthusian Friar in France, and died there.

(II.) George, an officer in the imperial service; *d. s. p.*

(III.) Thomas

(IV.) Patrick } Died young.

(V.) Robert }

(1.) Mary *m.* Edward (Plunket), 12th Baron Dunsany, of Dunsany Castle, county Meath. This noble also conformed to the Established Church, but took no steps to confirm the Barony and his right to a seat in Irish House of Peers, from which he was debarred by the attainder of 1691, of his father, Randall, 11th Baron Dunsany, who espoused the cause of King James II.; but being included in the Treaty of Limerick, his estates were restored. His son, Randall, who was born in March,

1739, and succeeded his father in 1791, as the 13th Baron Dunsany, claimed and was allowed his seat in the House of Lords in 1791.

Francis Allen died 7 July, 1741.

(III.) James.

(IV.) Richard.

1. Teresa, *m.* (1st) to James Donalan, of Johnstown, county Meath; and (2ndly) to Standish O'Grady, Esq., of Elton, county of Limerick, 2nd son of Darby O'Grady, Esq., of Kilballyowen, of same county.

2. Honora, *m.* to John O'Grady, Esq., of Kilballyowen, county Limerick, and was great grandmother of STANDISH O'GRADY, Chief Baron of the Court of Exchequer (1805-1831), who was elevated to the peerage of Ireland 26 January, 1831, as Baron O'Grady, of Rocklarton, county of Limerick, and VISCOUNT GUILLAMORE, of Cahir Guillamore, in same county.

3. —*m.* to Christopher Horish.

##### "WILL OF CATHERINE ALLEN.

"In the name of God, amen.

"I, Catherine Allen, of St. Wolstan's, in the County of Kildare, spinster, being of sound and disposing mind and memory, butt in a declining state of health, doe make this, my last will and testament, in manner and form following: that is to say I bequeath to my sister, Tipper, the sum of two hundred pounds ster.; I bequeath to Margrett Malgan ten pounds, to my sister, Margrett Allen, Ninety pounds, to my brother, William Allen, two hundred pounds; all the said Legacies to be paid out of five hundred pounds which I am Intitled to by our family Settlement, all the residue of my worldly substance not herein disposed of I bequeath to my brother, William Allen, whom I appoint Executor of this my last will and testament. In witness whereof I hereunto putt my hand and seal this, 17th day of february, 174½. Catherine Allen."

"Witness present, John Roe.

"William Allen, Sole Executor named in the above-written Will of Catherine Allen, deceased, was sworn to his beliefe of the truth of the said Will, and to the due Execution thereof, the 7th day of April, 1750, before us.

"James King, Surrogate."

(To be continued.)

##### ACTION FOR THE LOSS OF AN EYE.

IN the Queen's Bench Division No. 1, before the Lord Chief Justice, Mr. Justice O'Brien, and Mr. Justice Kenny, judgment was delivered in the case of *Smith v. Lemon*. The action was brought by the plaintiff, who is a sawyer, to recover £1,000 damages for the loss of his eye, sustained in the saw mill of the defendant in Enniskillen. The case for the plaintiff was that he was engaged in sawing a rough piece of timber; that the saw wobbled, with the result that a piece of timber about two feet long broke off, and was flung back obliquely against him, causing the injury complained of.

For the defence it was contended that the machinery was substantially sufficient, and that the occurrence was purely accidental. The jury found on the evidence that the machinery was defective, and that it was owing to its defective character the accident was caused. They awarded plaintiff £350 damages. The defendant then moved before the Queen's Bench to have that verdict set aside on the ground that it was against the weight of evidence.

Mr. Justice Kenny and Mr. Justice O'Brien held that there was no evidence sufficient to satisfy them that the jury was justified in finding that the action was caused by the defective nature of the machinery.

The verdict for the plaintiff was accordingly set aside.

\* Probably it was under this Equity Bill that St. Wolstan's was sold under an Exchequer Decree in 1752. (See IRISH BUILDER for 15th April, 1899.)

## LEGAL ITEMS.

## ANCIENT LIGHTS.

In the Chancery Division, before the Master of the Rolls, judgment was given in the case of *O'Brien v. Switzer and Company, Ltd.* The plaintiff, the proprietor of the Wicklow Hotel, sought an injunction to restrain the defendant company from erecting a building at the corner of Wicklow Street and Clarendon Street, which it was alleged would interfere with the access of light and air to the plaintiff's premises. The old building was 35ft. high, and the new building would be 73ft. in height. The defendants denied that the new building would interfere with the plaintiff's rights.

Counsel for the plaintiff—Mr. Gordon, Q.C.; Mr. Henry, Q.C.; Mr. Mahony, Q.C.; and Mr. D. O'Brien (instructed by Mr. Monks).

For defendant company—Mr. Serjeant Dodd, Mr. Campbell, Q.C., M.P., and Mr. A. L. Horner (instructed by Messrs. W. Fry and Son).

The Master of the Rolls, in giving judgment, said no evidence had been given that the new buildings would interfere with the access of air to the plaintiff's premises. The question was not whether there was any interference, but whether there was such interference in point of quantity—in point of magnitude—as would render the enjoyment of the plaintiff's house sensibly uncomfortable or less comfortable than it was before. His lordship said, that while there would be some interference, he was satisfied that the interference would be trivial and unimportant. To grant an injunction in this case would be practically to stop the raising of buildings in this city. They could not restrain or interfere with persons raising the height of their houses, although if they did not do so others would be more comfortable. He would dismiss the action with costs.

Mr. Serjeant Dodd said the defendant company had claimed an inquiry as to the loss incurred by delay, but he was instructed to waive that inquiry.

## RICHMOND ASYLUM.

At a meeting of the Asylum Committee, the High Sheriff moved that Mr. Richard Jones be elected chairman.

Alderman Ireland seconded the motion, which was adopted.

Mr. Hutchinson moved that Mr. R. K. Clay be elected deputy chairman.

Mr. Clay expressed his thanks.

## PORTRANE LABOURERS.

Mr. John Clancy moved that the wages of the labourers at Portrane be increased to 15/- per week.

Alderman Flanagan seconded the motion. He considered 15/- a week only a moderate rate.

Mr. Byrne did not think the ratepayers would be willing to add 50 per cent. to the wages of any class connected with the Asylum.

Alderman Ireland moved, as an amendment, that the question be referred to the Portrane Committee.

Mr. Welsh seconded the amendment.

The amendment was rejected by 25 to 10 votes.

## THE STANDARD RATE OF WAGES.

Mr. John Byrne said he observed the following clause in the report of the Supplies Committee:—"In all contracts entered into by the Board preference shall be given to Irish manufactured goods. It shall be inserted conspicuously on the forms of tenders for the execution of all works and the supply of all manufactured articles that the contractors shall pay not less than the standard rate of wages, and

observe the hours used in each trade in their several districts." He could not agree to the adoption of that clause. Did "conditions of labour" mean that non-unionists were not to be employed by contractors? If not, were they to starve?

Mr. Leahy—Let them join the Union.

Mr. Byrne—What would be the condition of a labourer, if they passed this report, who was advanced in life, and who was only able to earn three-fourths of a day's wages, or was only able to do three-fourths as much work as the younger man?

Mr. Kearns said when a man advanced in years consideration should be given to the fact that he had given many years of his service to build up the fortune of his employer. With reference to the fixing of the standard rate, it would be fixed on a moderate scale.

Mr. Simmons could not see why any obstacle should be raised, as they found that the principle for which they were contending had been adopted by the Government.

Mr. Clancy moved that the report should be adopted.

The motion was agreed to.

## HOUSING OF LUNATICS IN WORKHOUSES.

—The limited accommodation for lunatics in Cork Workhouse, and the regrettable increase of cases in recent years, have given rise to a serious situation of the Lunatic Asylum Board, Dublin Castle. A report, made by Mr. E. M. Courtenay, Inspector of Lunatics, says:—"Whatever mode of dealing with the insane poor of the district is adopted some time must elapse before any practical steps for their relief can be taken in hands. In the meanwhile I would ask the guardians to take any temporary steps in their power to improve the surroundings in the present lunatic ward. With this view I would repeat the suggestion made in my last report, that a wooden building might be erected to accommodate about 130 male patients. This building should be placed not in the male yard, but on the plot of ground on the other side of the building. By this means some better accommodation would be afforded for a few of the more intelligent patients, and more room would be left in the dormitory for the others. I would also suggest that the sheds on the female side should be extended so as to allow more space for the service of the meals and more elbow room for the women during the day. Above all, I would suggest that every effort should be made to keep down the numbers by sending all suitable cases at once to the District Asylum.

JACK OF ALL TRADES.—There has just been laid to rest at Koeffen, near Inspruck, the remains of a man named Johann Schwaighofer, who for 57 years had acted as schoolmaster and organist in various districts in the Southern Tyrol. His teaching and his organ-playing did not suffice to keep him, so a correspondent writes, and in his leisure time at Schwaighofer, was successively day labourer, wood-cutter, mason, carpenter, painter, thatcher, shepherd, etc. He was a learned man, and kept up correspondence with savants, poets, and artists of distinction. He wrote his own epitaph, which sets forth the simple facts that he was a schoolmaster, born at Rethenschoss, in 1817, and that he died at Koeffen, in 1899.

## From our London Correspondent.

THE persistent ignoring of the claims of the profession of Architecture to a share in those titular honours so freely bestowed upon the leading representatives of other callings is a matter of general comment, but what can be expected so long as the Architects as a body have no recognised standing. The result of the present unprotected state of the profession is that its leaders, no matter how high their standing and attainments, have to share the drawbacks attaching to it as a whole, and it is not unreasonable that those in high places, in selecting candidates for these honours, should not feel quite justified in officially recognizing a profession whose members are so blind to their own interests (on far more important matters than merely qual for titles) that they are content to see other professions enjoying the benefits of registration without making any effort to secure for themselves similar State recognition, and thus placing themselves upon a level footing with the closed professions of law and medicine, &c. Is it not time that our representative and allied bodies should put aside personal interest and party politics, and combine in achieving what is a legitimate ambition, and one worth winning, and which could so easily be won were opposition and misunderstanding turned into co-operation and support?

With the object of bringing forward the question of the Statutory Registration of the Profession, the Society of Architects are holding Provincial meetings in Sheffield and other towns in order to give the Provincial Architects an opportunity of expressing their views upon this vitally important subject. At the same time opportunity will be taken to discuss matters relating to "Light and Air," in connection with which it will be remembered that the Society of Architects presented a petition to the Lord Chancellor last November, asking for an inquiry to be made into the present state of the law relating thereto with a view to its amendment.

"ROYAL ARCH."

A NEW carpet and furniture warehouse is being erected by Pim Brothers, Ltd., will add to the appearance of the group of solid buildings which connects George's street, south, with Exchequer street. Nearly half of one side of George's street is covered by the big but rather antiquated warehouse of Messrs. Pim Brothers, which is made up of a series of houses gradually acquired since 1841. Mr. W. M. Mitchell, R.H.A., is the Architect.

EXCAVATIONS for a new guard-room at the Tower of London have resulted in the discovery of a number of stone, iron, and lead shot—relics, probably of Wyatt's rebellion. Historians contend that Wyatt failed in his attempt to reach the Tower, and that he was defeated about half a mile to the South of London Bridge. The clerk of the works has come to the conclusion, after careful investigation, that Wyatt not only attacked the Tower, but actually succeeded in forcing an entrance into it. The balls that have been discovered in all probability passed through gates either the Traitor's Gate or the one at the Bloody Tower—after being fired from the river. They were found embedded in the masonry.

## NEW CHURCH, OMAGH.

A NEW Roman Catholic Church has recently been consecrated at Omagh by his Eminence Cardinal Logue, with very elaborate ritual ceremonies. The church is of the decorated Gothic period, and is from the designs of the late Mr. W. Hague. The carving and sculpture has been carved "in situ" by Messrs. Harry Hems & Sons, of Exeter.

The high altar is of marble, chiefly white Sicilian. The shafts and inlays are of various coloured marbles and Mexican onyx. The groups, statues, and foliated panels are of white Carrara marble, and is also enriched with Venetian mosaics. The front of the altar proper is divided into three openings by columns having carved capitals, the centre and larger panel being filled with a group. Those on either side contain sculptured panels. The reredos, which extends several feet beyond this, is deeply panelled and filled in with various foliage, finishing at the ends with octagon shafts and carved capitals. The reredos is divided into three openings, the centre and larger one being of convex form, and is subdivided into three. The centre is filled in with coloured marble, and the two side ones are filled in with sculptured groups of angels. At either side of this are large groups in full relief representing "The Nativity" and the "Ascension." These five openings are divided by six cluster columns, with carved capitals; above these capitals spring three large arches. The outer ring of the centre one is divided into thirteen tracery niches, which contain statues of Jesus Christ and the twelve Apostles, with the background in Venetian mosaic. The inner arch is filled with sculptured dove rays, the background being of gold mosaic. The arches on either side are treated somewhat similarly. The work was successfully carried out by Mr. Edward Sharpe, sculptor, of Great Brunswick Street, Dublin.

**NEW CHURCH, BLOOMFIELD, DONAGHMOYNE.**—The church is named after St. Patrick. The foundation stone was laid on the 21st of August last by the Most Rev. Dr. Owens, Bishop of Clogher, who was accompanied on that occasion by the Most Rev. Dr. Carr, Archbishop of Melbourne. The site of the new church is along the main road from Carrickmacross. The work was commenced in January, and the building is already eight feet high. It is a cruciform edifice, built of a bluish-grey limestone found in the district. The character of the masonry is pitch-face work in gauged courses. About two feet from the ground is a plinth course of chiselled stone. The interior dimensions are—length of nave, 92 feet, which, with chancel 18 feet, gives a total length of 110 feet; width of nave, 32 feet; length of transepts, 30 feet; width or projection of each transept beyond the line of nave, 22 feet; total floor area, nearly five thousand square feet. The tower, 9 feet square inside, is placed at the right-hand corner of the western gable.

PLANS are now under consideration at the War Office for the rebuilding and alteration of a number of barracks in London and the provinces. The "barrack-room" system will probably be abolished, and rooms substituted for the use of men during the day. Each man is to occupy a bed-room with a window, similar to those in the Rowton Houses,

The latest information received from Khartoum is to the effect that the Gordon Memorial College, the foundation stone of which was laid by the Duke of Connaught some time ago, is gradually rising from the ground!—*Exchange Telegraph.*

The election of Town Clerk for Dalkey will take place on Monday, 3rd July next. Amongst the candidates mentioned are—Mr. Gaban, Castle-street, Dalkey; Mr. O'Neill, son of the retiring Town Clerk; and Mr. McCaul, Bray.

**NEW RACE STANDS AT CHESTER.**—On 24th June the Duke of Westminster, chairman of the Chester Racecourse Company, well and truly laid the foundation stone of the new stands which Messrs. Magnall & Littlewood have designed, and for the erection of which Messrs. Parker Brothers, of Chester, are responsible.

Several of the Irish Boards of Guardians have made representations to the Local Government Board to the effect that it would be desirable to establish a central department for the analysis of drugs, etc., to be supplied to the workhouses. This suggestion, however, the Board could not see its way to adopt, and the Guardians are about to invite tenders separately from persons desirous of making analyses of their supplies.

**MASONIC ORPHAN SCHOOLS.**—A contract has been entered into for extensive additions to the Masonic Orphan Boys' Schools at Clonskeagh. The work consists of a new wing and will comprise schoolroom, classroom, etc. This is the fourth series of building operations at Richview: 1st, the old, last century mansion, which boasts some good inlaid marble mantelpieces and nice joinery; a feature of the old dining-room is the semi-circular panel, containing carving, over a sideboard recess. 2nd, the works undertaken in 1887—undertaken to fit the house for the purpose of a school, Mr. T. Drew, R.H.A., being the architect. 3rd, extensive additions and alterations from the designs of Mr. Drew in 1894. 4th, the present contract, for which Messrs. Parry & Ross are the architects. Mr. R. H. Lidwell is the contractor, the amount being about £5,000, the present buildings being entirely inadequate to the increasing requirements of the school.

**A HUGE LOCK OUT.**—The Secretary of the London Trades Council has issued a circular, in which he is appealing for assistance for the workmen of Denmark, who, to the tune of 40,000, are at present locked out by the employers. The circular states that the trouble was caused, in the first place, by some of the men refusing to abide by an agreement which had been accepted by the general body of workmen in the joinery trade. Ultimately, the objectors were persuaded to resume their employment but the employers asserted that the agreement having been broken by their action, in the first instance, it ceased to exist, and forthwith they proceeded to formulate a new series of demands, which the men allege would, if accepted, mean the smashing of their organisations. This demand not being accepted, the employers commenced to lock out the engineers, ironfounders, smiths, tinsmiths, bricklayers, carpenters, painters, plasterers, and others directly and indirectly engaged in building operations, and accompanied this with an intimation that unless the terms were accepted other trades would also be locked out.

**A NEW CHAPEL AT DRUMCONRA.**—A new chapel for St. Patrick's Training College, from the designs of Mr. G. C. Ashlin, of Dublin, was consecrated on Sunday, June 18th. The chapel is built of red brick, with Portland stone dressings, and is 85 ft. long by 28 ft. broad, and 36 ft. high. Mr. James Donovan was the builder.

**SELF-EDUCATED POLICEMAN.**—A few weeks ago a Leeds policeman got a painting accepted (though not hung) at the Royal Academy. Now it is announced that Mr. Balfour has granted a pension of £40 per annum out of the Civil List Fund to Charles Assheton, ex-policeman. Assheton was a policeman in the Merionethshire force. During his spare time he turned his attention to literature, taught himself Latin and kindred subjects, and published many books of exceptional merit.

## APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in.
*Builder's Foreman	London County Assn., Bexley, Kent	58s. per week	June 28
*Clerk of Works	Poplar B. of W.	£33s. per week	do.
*General Foreman	Vestry, St. Matthew, Bethnal Green	£2 10s. per week	June 29
*Clerks of Works (2)	Essex C.C.	£23s. per week	July 1
*Surveying Assistant	Sheffield Council	£110.	July 3
*District Surveyor	Sheffield Corp.	£200	do.
*Analytical Assistant (Sewage Works)	do.	£150	do.
*Building Inspector (4)	do.	£120 each	do.
*Clerk of Works	C. Boro. of W. Ham	£4 4s. per week	July 4
*Assist. Architect	L.C.C.	£800 a year	July 10
*Building Inspector	Plymouth Corp.	£100.	July 12
*Surveyor of Highways	Lymington R.D.C.	£90	July 29
*Instructor in Manual Training and Carpentry and Joinery	Battersea Polytechnic	£130	No date
Town Clerk, Dalkey	Dalkey R.D.C.	£135	

## COMPETITIONS.

Nature of Work.	By whom Advertised.	Premiums.	Designs to be delivered.
Isolation Hospital	Wharfedale Union Hos. Com.	£30 and £15....	Sept.
*Designs for Electric Lamp Standards & Brackets	St. Martin's in the Fields Vestry	£10 and £5....	July 8

## CONTRACTS.

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c., Supplied by.	Tenders to be delivered.
Waterworks	Waterford R.D.C.	J. Mackey, Workhouse	
Dublin. — Sewer, Sea Wall, Precipitation tanks, &c	Corporation	Spencer Hurty and G. Chatterton, M.I.C.E.	July 15
Labourers' cottages	Celbridge Guardians	L. A. MacDonnell, 39 Kildare Street	July 30
Leixlip Bridge, Belfast.	Belfast Corporation	Sir S. Black, Town Clerk	July 28
Dispensary Residence, Gurraneboy, Cork	Cork Guardians	J. Cotter, Clerk	July 29
Carriganvar Dispensary — Repairing, painting	Cork Guardians	J. Cotter	July 29
Erection of 26 cottages	Naas Town Commissioners	M. Gogarty, Town Clerk	July 5

## TENDERS.

## BALLYBRACK ARTIZANS' DWELLINGS:—

N. Nolan.....£2,129 0 7	G. Dixon.....£3,538 0 0
G. Bower.....2,041 19 11½	G. Long.....2,593 15 10
P. Caulfield...2,352 0 0	J. Beckett.....2,300 0 0
H. Pemberton 2,249 0 0	

† Accepted.

**LURGAN.**—For erection of new Masonic Hall. Quantities by Mr. S. Hunter. Mr. G. W. Ferguson, Architect.

Burns & Prentice.....£1,534 19 0	Collen Bros., Ltd., Portad'n £1,400 0 0
Bright Bros. ...1,530 15 9	† M. Millard 1,250 7 5
T. Collins.....1,445 0 0	

† Accepted.

**LONDON.**—For the reconstruction and diversion of a portion of the Victoria Street sewer, for the London County Council:—

Killingback & Co.....£7,578 0 0	Pedrette & Co. £5,816 10 11
J. Jackson.....4,975 8 9	
J. Dickson.....6,368 17 1	Mowlem & Co. 4,837 0 0
E. Hes.....6,163 0 0	J. H. Neave.....4,813 1 10

**LONDON.**—For rebuilding "The Crown," Blackwall, for the New London Brewery Company:—

Maxwell.....£2,950	G. Barker.....£2,725
Snewin.....2,927	Jarvis.....2,669
Stevens.....2,840	Jackson.....2,643
Goodall.....2,751	

# SUPPLEMENT.

## ITEMS RECEIVED TOO LATE FOR CLASSIFICATION.

### OUR LONDON LETTER.

It is proposed to celebrate the Fiftieth Anniversary of the Architects' Benevolent Society, which will occur next year, by a dinner, which may afterwards, possibly, develop into an annual gathering, with a view to bringing the aim and work of this useful Institution more prominently before the members of the architectural profession. At present the number of subscribers is only 300, a very insignificant proportion of those who are in a position to support this Society, and if those who may not be aware of the good work which is being unostentatiously carried on, will send to the Offices of the Society, 9 Conduit Street, W., for a copy of the Annual Report, we are sure that the Executive will no longer have to complain of want of support.

At a recent meeting of the R.I.B.A., the desirability of advertising the premises in Conduit Street by an inscription on the street front was discussed, which led to the more important question of acquiring or building premises for themselves after the manner of the surveyors and other institutions; and if the architectural profession, instead of being split up into so many societies and associations, were united under one head, then there would be no great difficulty in the realization of a much to be desired scheme; but until the Institute show that they are prepared in this and other matters to move with the times, and take the initiative in matters affecting the welfare of the whole body of the profession, we fear there is little chance of them securing that support which the suggestion to acquire a building worthy to shelter the representative architectural body deserves.

The Glasgow International Exhibition to be held under the patronage of the Queen and Prince of Wales in the summer of 1901 promises to be one of the most important ever held in Great Britain. The guarantee fund already exceeds £447,000, and the exhibition is expected to surpass that of 1888, which was visited by over six millions of people, and resulted in a clear surplus of £54,000. This sum is being expended in the erection of Fine Art Galleries, which will form part of the coming Exhibition.

In the various sections into which the Exhibition is to be divided, Fine Art and Archaeology are to have special attention, and among other sections are "Locomotion and Transport," "Electricity," "Marine Engineering," "Woman's Section," and "Sports."

To facilitate the delivery of goods, lines of rails will be run into the grounds from several points, while the port of Glasgow offers a cheap and ready means for the delivery of sea-borne goods.

In addition to the attractions of the Exhibition, there are to be meetings of the British Association, the Naval Engineers and Shipwrights' and other important Societies; but we are not aware that arrangements have been made for the Architectural profession to be officially represented, though some of the leading Scotch Architects are on the Building and Fine Art Committee.

The removing of the new Savings Bank from the City to the West End was fore-

shadowed by the ceremony of laying the foundation stone last Friday of what promises to be a magnificent pile of buildings, the site of which extends over 3 acres, though only part of this is to be covered at first. The site has been well chosen, especially as regards railway facilities, and that the authorities are convinced of the necessity of being up-to-date in all respects in the new buildings is shown by the intention to provide storage for over 1,000 cycles, and the whole arrangement and fitting of the premises will be as perfect as the experience of nearly forty years of Savings' Bank requirements and administration can make them.

The Prince of Wales performed the ceremony of laying the stone, a huge block of Portland, which was brought into position under the guidance of the Architect, Mr. Henry Tanner, F.R.I.B.A., of H.M. Office of Works.

The London County Council advertise for an Assistant Architect at £800 per annum, to take the place of Mr. Hebb, who retires after over twenty years' service, but who has been retained for another year in view of the superintending architect having only lately taken office, and there being a large increase in the work of the department.

### BOOKS RECEIVED.

*Portland Cement, its Manufacture and Use.*  
By D. B. BUTLER. London: E. and F. Spon. Price 18/-.

THIS work, by Mr. D. B. Butler, M.I.C.E., etc., etc., deals with the manufacture, use, and properties of Portland Cement.

The ever increasing use of this pliant material, not merely in great engineering works, but in ordinary building operations, renders such a work a book of general interest. It behoves every engineer and architect nowadays to make himself thoroughly well up in all that is known of cement. The necessity for such a knowledge is no longer confined to the marine engineer.

Mr. Butler, unlike the authors of one or two recent volumes, deals with cement rather than with the more general subject of concrete; though he touches on the important subject of the matrix too. The matter is dealt with very exhaustively, and on the face of it the book is the work of a man who knows his subject. The history of cement from its invention, its chemical properties and constituents, to its practical use, is dealt with in detail.

Several items in the book are of new interest, notably the compilation of the standard specifications of Foreign Governments—while the more original observations, whether compiled or personal to the author, are distinctly useful—some of them, particularly the records of the influence of atmosphere and temperature on the setting and durability of concrete, we do not remember to have seen in print before.

We should, for the sake of the student and average architect, have been glad had the author given his own views on the specifying of cement and concrete in greater and more elementary detail.

The work is one which, we think, will take its place as a standard text.

[BEFORE THE LORD CHIEF JUSTICE AND A SPECIAL JURY.]

DONOVAN v. THE DOLPHIN HOTEL COMPANY LIMITED.

This was an action by Mr. Donovan, builder, Harcourt Street, to recover £3,150 odd on foot of "extras" in the rebuilding of the Dolphin Hotel. The defendant company lodged £2,520 in court, being the amount certified for by the architect. The architect had refused to certify for the balance. The plaintiff contended that there was a new agreement as to the £600 in dispute. After the case had been partly heard an arrangement was come to by which the plaintiff agreed to accept, in addition to the amount lodged in court, a sum of £300 in full discharge of debt and costs. A consent to this effect was made a rule of court.

Counsel for the plaintiff—Mr. Seymour Bushe, Q.C.; Mr. Blood, Q.C.; and Mr. Chambers (instructed by Messrs. Hayes and Son).

For the defendant company—Mr. Matheson, Q.C.; Mr. Mahony, Q.C.; and Mr. J. B. Powell (instructed by Mr. Charles Daly, Messrs. Gerrard and Co.)

### THE FIRST LADY ARCHITECT ADMITTED.

[Miss Ethel Mary Charles, A.R.I.B.A., is the first lady to achieve this distinction.]

Some ladies for designing  
Have talents truly rare,  
And many are much given to  
"Build castles in the air."

Mr. J. J. Butterly, wrote in reference to the application for 107 labourers' cottages about to be considered by the council, pointing out that in 1897, a scheme was promoted in the Finglas Division, in which ten of the new cottages were to be erected. After much trouble and expense this scheme contemplated 15 available houses out of which two had been partly built and 13 had been twice set to the contractors and as often thrown up. He urged that until these houses had been shaped into existence and actually let there could be little reason for the council to further involve itself.

The Chairman and Colonel Lindsay stated that the new scheme would not prevent the old one being carried out, but that it would be carried out as fast as possible.

Only one tender was received for the erection of 13 labourers' cottages in the Finglas Division at a total cost of £2,097, which was about £161 each cottage.

The Chairman observed that that was the highest price they had paid yet.

The Clerk of Works, Mr. Morris, said it was the highest by £2 they had yet paid for building cottages, but he explained that the contract differed from previous ones inasmuch as the arbitrator had stipulated that there should be a boundary wall enclosing the entire plot.

In reply to Mr. Daly, the Clerk of Works stated that they would be paying £10 per cottage extra for ornamentation.

GOLD MEDAL.

SILVER MEDAL.


BRONZE MEDAL.

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 HEAD OFFICE & WORKS, THORNCLIFFE RD BRADFORD, YORKS.  
 DUBLIN—A. E. MILLS, Agent 15 Talbot-place.

# THE IRISH BUILDER.

VOL. XLI.—No. 948.

DUBLIN, JULY 15, 1899.

## ANNOUNCEMENT.

WE have the pleasure to inform our readers that we have made arrangements with

MR. C. A. T. MIDDLETON, A.R.I.B.A., F.S.I., &c., to publish a series of fully illustrated articles on

### "CLASSICAL DETAILS."

The first instalment will appear in our next issue (1st August).

These articles will contain a large amount of information for the Student.

The IRISH BUILDER may be ordered of all Newsagents.



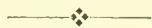
## ARCHITECTURAL REGISTRATION.

THE question of Architectural Registration is once again to the fore, chiefly owing to the energetic action of the Society of Architects in organising a series of provincial meetings in England, the first of which was recently held in Sheffield, and resulted in the almost unanimous adoption of a strong resolution in favour of registration.

It is, from one point of view, almost wearisome to again refer to a well-worn and thoroughly thrashed-out controversy, that periodically agitates us like the sea-serpent and the "silly season" correspondence of the *Daily Telegraph*, yet one which is more correctly, perhaps, like the poor, "always with us." The pros and cons of this involved question have been so frequently and so forcibly put before the profession that little is left to say that has not been said, and better said, before. To us it seems that the advocates of this measure have made a wise move in publishing their propaganda in the provinces; for it must be evident to all that there their strength lies. In London they are but an atom in the great world, while in their appeal to the country we cannot but think they have made a well-considered move. It is the humble practitioner of the provincial towns who really feels the pressure of illegitimate and cut-throat competition; who, after years of hard work, close application to business, and frequently an expensive training, finds himself handicapped in his own native place by the unfair recognition on the part of the public of every tinker's jackall who chooses to sport a brass plate and dub himself Architect. While we fully sympathise with those who feel this pressure of ignorant and untrained competition, we cannot shut our eyes to the difficulties that lie in the way of the realisation of the dream of the advocates of registration. Carried away by their enthusiasm for the cause, they shut their eyes to the fact that the passing of the Bill at the present juncture would accentuate, to some extent at least, the very difficulties which it is drafted to remedy. The passing of the measure would at once confer a diploma on every person who chose to demand registration as an existing practitioner—a big price to

pay, and one which the present generation of architects must discharge ere they can hope that the advantages anticipated will accrue. That the Bill is likely to become law in the teeth of the opposition of the Institute is more than doubtful. The question is one bristling with difficulties, and can only be met by a wise and conciliatory policy. If the provinces can be aroused, a great addition of strength will come to the registration men, a gain which will give their representations an added weight both with the general body of the profession in London and in the House of Commons.

Much as we respect Mr. Emerson for his standing as an architect, we fail to accept his recent post-prandial utterances at the Institute banquet as either dignified, or as throwing oil on troubled waters, in respect of a question which seems like Mr. Henry Arthur Jones' "Ferguson Pybus," destined to in some way "stamp itself upon the age."



## THE ARTS AND CRAFTS SOCIETY.

WE have received a communication from Lord Mayo, as President of the Society, with reference to the coming Exhibition, intended to be held in November next. It affords us pleasure to give prominence elsewhere in our columns to an abstract of the programme of this excellent and useful society. The Committee is a very influential and representative one, and has about it all the elements calculated to ensure success for the project.

The present position of the Arts and Crafts of our country is a subject in which every Irishman ought to feel an interest and responsibility, and we know of no method more likely to awaken the general public than the scheme which is before us.

To architects in particular, it ought to be a matter for congratulation, that at last there appears to be an awakening to the claims of Art in our surroundings. The immense strides made in England in the course of a couple of decades is truly remarkable. No such renaissance is on record in the history of Art. The Gothic revival touched and gave life to our architecture and the after effects of the movement have shewn that the principles inculcated have multiplied and borne fruit an hundred-fold, as instanced in the work of the men of the present day—so much for architecture, the mother of the Arts, but for the subsidiary decorative crafts the effort of real progress is more recent. The work of William Morris is undying, and his influence everywhere apparent. The day when Morris started the Kilmiscott Press marks a new era in printing, and his textile designs have exercised an enduring influence.

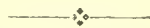
So, too, when we look at the stained glass which Messrs. Bodley and Garner and many others have had executed for them in recent years, we see what a marked advance in the sense of design, colour, and the use of the material the years have brought about. Why, then, should this country be behind England? Yearly thousands of pounds are expended upon foreign glass and church furniture, mostly indifferent in design and execrable in colouring and sense of the nature of the materials worked in.

During the last century the cabinet-making and joinery of Dublin was second to none. The joinery work of any old house in Dublin tells us that. The plaster ceilings modelled in situ, and the marble inlaid mantels tell a like story. How great is the decadence of taste in the present day?

If the Arts and Crafts Society succeed in arousing the interest of the cultured and money spending public, and in educating the eye of the craftsman to discern the distinction between refined detail, reticent and good, and the vulgar, tawdry rubbish offered to the public, the first step in the right direction will have been achieved.

Everyone of the Crafts catalogued in the circular of the Arts and Crafts Society, is a trade or an art capable of the highest development in Ireland.

We sincerely trust that the clergy of all denominations, who have the spending of much money on decorative work, will support this Exhibition, and co-operate in removing from us the reproach of those inappropriate and artificial interiors which cause the generality of our churches to contrast so unfavourably with those on the other side.



## WITH THE ARCHITECTURAL ASSOCIATION OF IRELAND IN CHESTER.

THE Architectural Association held their annual excursion in Chester this year, and, as we predicted, the committee have had no reason to regret their choice, the members and guests present numbering over thirty.

The party left the North Wall on Friday, 30th June, and duly arrived in Chester, the headquarters being the "Green Dragon Hotel."

On Saturday the entire day was devoted to the city itself. The members had the great advantage of the guidance and advice of Mr. Minshull, of the well-known firm of Douglas and Minshull, who most kindly devoted practically the entire day to guiding the strangers. All the objects of architectural interest were visited in turn, the starting-point naturally being the cathedral, where the members were most courteously received by the Very Rev. the Dean (himself an Irishman), who directed attention to the matters of greatest interest, notably the refectory, with its unique ambo, and the extension of the refectory, now ruinous, and recently rescued from the bounds of a tenement property adjoining. The fullest facilities for sketching and measuring were granted by the Dean.

Cardinal Wolsey's Cloister was also a subject of particular interest. The modern tiling and mural mosaics were much admired, the latter work being executed by an Irishman named Burke, from designs of Clayton and Bell. These panels, now several years completed, harmonise in a most delightful manner with the rich, warm tone of the old fabric. They are amongst the most successful efforts of modern ecclesiastical decoration that we remember to have seen.

Sir Arthur Blomfield's Grammar School buildings, adjoining the cathedral, are a fine bit of traditional English detail and design.

Mr. Douglas' famous St. Werburgh's Street excited the admiration of all.

The "Bear and Billet," the old "Falcon Inn," and many other time-honoured show-places were visited. St. John's Church, a very fine old Romanesque edifice, came in for admiration. The vandalism which caused the removal of the decorated east window, to make room for a modern "Norman" window, received well-merited condemnation. St. John's has a fine crypt.

Bishop Lloyd's Palace was also viewed with interest. It was recently proposed to sell the old house to an American syndicate for re-erection in the United States, but owing to the public-spirited action of a citizen of Chester the scheme was happily frustrated, and the house is now in process of repair and restoration. The members had the privilege of meeting this gentleman, an enthusiastic antiquarian.

It is difficult to say whether the old or the modern work came in for most praise, there is so much of both that is good. We know of no town similarly circumstanced which has been so fortunate in regard to its modern surroundings and its freedom from vandalism. The Town Hall—by Mr. W. H. Lynn, of Belfast, a particularly good example of the secular Gothic in vogue thirty years ago—was inspected. It contains some very nice oak work, recently designed by Mr. Lockwood, a local architect, for the council chamber. The court contains a fine Gainsborough, a portrait of King George III., one of the finest examples of the English School of portrait-painting of the seventeenth century.

Mr. Lockwood's "Blossom's Hotel" is an interesting modern Georgian design, remarkable for the pleasant mellow colour of its terra cotta. A Bank, on the way from railway station, is an admirable example of a design for a corner site; it is by the same architect.

The Assurance buildings, next the Westminster Bridge, by Mr. Douglas, are also a good example of street architecture.

Amongst the guests being Mr. W. Minshull, Chester; Mr. S. M. Fairlie, A.R.I.B.A., Manchester; Mr. MacArthur Butler, Secretary Society of Architects, London, etc., etc.

In the evening the annual dinner was held. The President, Mr. George Sheridan, A.R.I.B.A., presided. The members present included—Messrs. C. H. Ashworth, F. A. Butler, R. M. Butler, M. J. Tighe, Joseph Holloway, A. I. McGloughlin, T. Coleman, P. F. O'Sullivan, Anthony Scott, E. Sharp, F. Morley, James H. Webb, H. Allberry and F. Hicks, Hon. Secs., etc., etc. The health of Her Majesty the Queen having been duly honoured, the President proposed the health of Mr. Minshull, and expressed the deep indebtedness of the Association for all the trouble he had taken to make the visit pleasant and profitable. The toast was received with acclamation. Mr. H. Allberry proposed the health of the other guests, Mr. MacArthur Butler replying. Mr. R. M. Butler proposed the health of the outgoing President, Mr. J. Howard Pentland, R.H.A. Songs and recitations were contributed by Messrs. Holloway, Hicks, O'Sullivan, Coleman, McGloughlin, and Tighe.

On Sunday most of the party who remained over visited the new church at Eccleston, designed by Messrs. Bodley and Garner, and now in course of erection, for the Duke of Westminster. The view from the River Dee is a most charming one, and the design and detail are fine examples of Mr. Bodley's well-known and characteristic work.

Eaton Hall was more admired for its clever and original stables, outbuildings, and lodges, the work of Mr. Alfred Waterhouse and Mr. Douglas, than for the palatial mansion itself.

The return of the party by the Irish Mail on Sunday night brought a very successful excursion to a close. The Secretaries, Messrs. Hicks and Allberry, are to be warmly congratulated on the results of their labours.

The "Green Dragon" proved to be a very well-appointed and comfortable hotel, and we cannot do better than to counsel any of our students who desire a delightful couple of days sketching to visit Chester and neighbourhood, and make the Green Dragon their head-quarters. They will find the charges most reasonable.

#### ARCHITECTURAL REGISTRATION IN SOUTH AFRICA.

An Architectural Association is being started at Cape Town under the title of the South African Society of Architects. The objects are to deal with the matter of competitions, which carry most glaring abuse in the colony—more through indolence than fraudulent intent, it is thought; and to expose the fraud of incompetent and low-class persons who, thanks to the liberties permitted to them by the powers that be, and through ignorance or thoughtlessness, are running riot in every centre of South Africa. It is also hoped in due course that the Governments will receive a deputation who will be appointed to negotiate the terms upon which a charter of incorporation will be granted, to be followed by the licensing of only competent men to practise as architects. Eventually affiliation to the Royal Institute of British Architects, and the holding of local examinations for the associateship of that body, will be arranged if possible.

The moving spirits are Mr. Arthur H. Reid, F.R.I.B.A., F.S.A., &c., past President of the South African Association of Engineers; Mr. Henry Baker, A.R.I.B.A., and his partner, Mr. Massey; Mr. C. H. Smith, A.R.I.B.A.; Mr. Ackermann, A.M.I.C.E., &c.; Messrs. J. Parker, J. C. Tully, A.R.I.B.A.; Vixie, Boxe, and others, are to be invited to join the movement.

We heartily wish it success, and only regret that the Institute is not yet prepared to take similar action. All our colonies will have Architectural Registration apparently before we get it here at home.—*Building News*.

#### THE SIMPLON TUNNEL.

The *Kölnische Zeitung* (Cologne Gazette) just to hand gives an interesting account of the progress of the Simplon tunnel; we think that in view of the discussion respecting the Channel tunnel between Ireland and Scotland, some particulars may be of interest to our readers. Our Tontonic contemporary remarks that living in an age of such wonders as the phonograph, the Röntgen rays, telegraphy

without wires; this extraordinary work has become a matter for only comparative astonishment.

The St. Gothard was brought to a successful conclusion and why not the Simplon? Interesting details of the conditions of work, etc., are given but space prevents our quoting in detail. The temperature in the Simplon tunnel averages 42°, while in the St. Gothard it was 30·8°. The St. Gothard is 14,984 kilometres long, while the Simplon is 19,738 kilometres, making it the longest tunnel in the world.

A new system has been adopted in the construction. Two parallel borings run at a distance of 17 metres apart, these communicate at intervals of about 200 metres and only by this method has it been possible to protect the workers from the noxious gases which exist; a free current of air is also created.

In order to render the temperature tolerable to the workers, a line of immense pipes has been introduced. Through these water from the Rhone is constantly passed at a high gradient, and with considerable velocity. This has the effect of cooling the atmosphere and making it possible to work in the tunnel. The "effluent" (if we may so term it) from this line of pipes is not wasted, but goes to form the motive power for working the hydraulic boring engines.

There is no record of such rapid progress in tunnel engineering as in the present case. The contractors are Brand, Brandau et Cie, who have undertaken to complete the work in five and a-half years under a penalty of no less than 5,000 francs per day. A similar bonus is offered for every day earlier than the specified time for completion. In order to comply with such stringent conditions, the firm have seen the vital importance of preserving the health of the workers unimpaired. For an eight-hours' day the miners receive 3 fr. 50. Dwellings have been erected in which they reside, every comfort being provided; good lodgings, three meals per diem, baths, reading-room, etc., for which each man is charged 1½ francs.

The process of boring adopted is a method whereby from 6 to 9 borings are made with a hydraulic steel boring tool, an operation which generally occupies about 5 hours. The tools are then withdrawn and the cavities filled with a special compound said to be the most powerful explosive known, compounded of a mixture of nitro-glycerine and collodium gun cotton. This compound being also the dearest, one can gauge the gold that is being sunk in the Simplon tunnel.

The question of lighting has been a serious difficulty; the special safety lamps being entirely inadequate and casting a shadow, a lamp known as the "open Bergmann" lamp is being used, good lighting being most essential when we reflect that the loss of a single minute every day for five and a-half years would amount to more than a day and every day costs 5,000 fr. To overcome the difficulties of lighting and blasting Professor Linde has established a Laboratory on the site and is engaged on the task of endeavouring to discover a safer and more powerful explosive than any hitherto known.

Following the custom of most of our own daily journals, the *Gazette* omits to record the name of the engineer!

## Current News.

### FIND AT HAMPTON COURT.

AN interesting discovery, the *Manchester Guardian* reports, has been made by Lord Esher and other officials of the Office of Works at Hampton Court Palace. Every visitor knows Queen Anne's drawingroom, which is in the centre of the east wing of Wren's building. The beautiful ceiling represents Queen Anne dressed in purple and ermine in the Chariot of Justice. Over her head is a crown held by Neptune and Britannia, while surrounding are various figures representing Peace and Plenty. It has now been found that the whole of the walls were similarly painted by Verrio to represent Queen Anne's apotheosis as Queen of the Sea in the four great quarters of the globe. Latterly some of the more modern pictures hanging on the walls were removed to Kensington Palace, and it was decided to thoroughly clean the room. Then it was found that the walls were, about 1735, hung with silk damask, and in 1833, they were actually "papered." On carefully stripping the paper off the walls it was seen that Vandals who first obscured the frescoes had done immense damage by cutting away much of Verrio's work to insert the battens on which they stretched the canvas to hold the damask covering. By carefully nursing every bit of the design, however, the decorators have been able to reproduce the fragments of the pictures which were torn away by the workman's hammer. Contrasted with the King's staircase and its heroic mural paintings by Verrio representing the Triumph of Bacchus, it is said that the "new" Verrios in Queen Anne's drawingroom are infinitely better in colour and design. The drawingroom was the last room Verrio painted, as his eyesight failed him. Queen Anne gave him a pension of £200 a year and rooms at the Palace, where he is reported to have died in 1707. The Office of Works have also just obtained direct control of Wolsey's kitchen, a vast chamber in good preservation, with a tremendous fireplace, and the "dogs" and spits actually in use in the great Cardinal's time.

**MOTOR LURRIES**—THE "lurry" is a very useful vehicle, even when depending for its motive power upon a man or a horse. But now we hear of a motor lurry which has made its first appearance in Manchester. It was built by a Lancashire firm for Messrs. Deakins, Limited, of Manchester, who are trying the new vehicle for the purpose of carrying goods from the firm's bleach works at Belmont to Manchester warehouses, and from the warehouses to the works. The distance by road is some eighteen miles, and in places the journey is very difficult for horses and luries, owing to the steep gradients; but the motor lurry, which carries a load of four tons, makes the journey comfortably in four and a-half hours.

**ANTIQUARIAN DISCOVERY NEAR DROGHEDA**.—The Royal Irish Academy has become possessor of the ancient cross and bell lately discovered by a labourer named Flanagan while engaged in making excavations in a quarry at Oldbridge, near Drogheda. Flanagan has received £25 for his lucky find.

**MONUMENT TO THE EMPEROR WILLIAM**. (Rothausen, Germany).—The first prize for a memorial to the Emperor William the Great has been awarded to Herr Bancke, sculptor, Düsseldorf. The second prize to Herr Stockmann, sculptor, Dorrenbach, and J. Kirsch, architect, Cologne. The third prize being given to Herr Karl Müller, Düsseldorf. Five designs were submitted.

### ART INDUSTRIES EXHIBITION.

ENTRIES for the forthcoming Art Industries Exhibition closed with the Royal Dublin Society on Saturday last.

THE "DRAMA IN STONE."—The latest report of the permanent architect of the Cologne Cathedral contains some interesting particulars regarding the cost of the additions and alterations which have been made to this huge Gothic fane during the past 75 years. When the work began in 1824 only portions of the choir and the basements of the two gigantic towers were finished. Since that year three master architects have devoted their lives to the completion of the great "Drama in stone," as the old Kaiser called it. Under Herr Ahlert, the first of these, nearly £30,000 was spent in 18 years. The next master builder, Herr Zwirner, repaired and raised the outside walls, finished the portals, and improved the iron construction in the roof at a cost of nearly £330,000. The final period, under Herr Voigtel, began in 1862. In the 37 years which have since elapsed, £740,000 have been spent. The total outlay, therefore, since the work was begun in 1824 has been nearly £1,100,000.

**TECHNICAL SCHOOLS AT EXETER**.—The carved work that adds such material architectural ornament to the main façade of these fine additions to the Technical Schools, and are an extension of Albert Museum at Exeter, has been executed by Messrs. Harry Hems and Sons, the well-known sculptors of Exeter. When the first portion of the Albert Museum was erected in 1866 from the designs of the late Messrs. John Hayward and Sons, architects, of Exeter, the Venetian style of Gothic introduced therein was quite new to this country. And, in the West, particularly, it was no mean matter to find workmen sufficiently skilled to carry out the details of this particularly graceful phase of Italian art. As for the carved work, no craftsman then lived in our Western counties who could undertake it. It was then that, at the suggestion of the late Mr. Kent Kingdon, by far the largest benefactor to the institution, a rising young artist in London, by name Harry Hems, was brought down from town to Exeter to do the necessary sculptured work. That was fully thirty-three years ago, and like the proverbial Scotsman, who once crosses the Tweed from the Land-o'-Cakes, he has not yet gone back again. Since then Mr. Hems has done a vast amount of personal work, assisted in latter years by able and talented sons, and a well trained and efficient staff. At a recent gathering of his employees at a friendly supper, Mr. Hems, as their chief, was able to say that during his residence in Exeter he had paid to them over a quarter of a million of money in wages alone.

**ST. DUNSTAN-IN-THE-WEST**.—It is to be hoped that the proposed building up of this church, which forms so conspicuous and interesting an object in Fleet-street, will be prevented. There can be no doubt that the present aspect of the tower, seen standing out from the church, and with an open space on each side of it, will be entirely spoiled by building up close against it, so as to leave only its front exposed. Its present appearance forms one of those picturesque incidents which here and there relieve the London streets, and which seem to be regarded by many people only as waste space which might be remuneratively filled up. At this rate all the picturesque element remaining in London will soon be wiped out. —*Builder*.

### ST. MARY'S, SHANDON, CORK.

ON St. Peter's Day the Lord Bishop of Cork dedicated some elaborate choir stalls and clergy seats in the parish church. The new additions comprise accommodation for, besides clergy, twelve men and the like number of singing boys, and are made entirely of the best selected British oak. The seat ends are of massive character, delicately traceried and carved throughout, with ornament of a particularly ornate and decorative character. The edges of the book-boards are embellished with a deeply-cut ornament, whilst the fronts are entirely composed of pierced work of a striking design.

The Lord Bishop was assisted by about fifty robed clergy, the Dean of Cloyne preaching at the dedication service, whilst the pulpit was occupied in the evening by the Dean of Cork, both services being largely attended. Messrs. Harry Hems & Sons, the well-known church workers of Exeter, carried out all the work, and these busy artists' workmen fixed all in position.

The Right Rev. Archdeacon of Cork (Rev. Dacre H. Powell, D.D.), is the Rector of St. Mary Shandon, and he is, as well as Messrs. Hems, to be congratulated upon the entire success of the work. After the dedication service luncheon was partaken of in the schoolroom adjoining the church, over seventy sitting down, and at which the donress (Mrs. Murphy) was warmly thanked for her handsome gift to the church.

THE BOSCOREALE "TREASURE."—The Boscoreale silver plate is now safely enshrined in the museum of the Louvre, thanks to the munificence of a patriotic millionaire, M. le Baron Edmond de Rothschild. It was on Easter Eve, April 13th, of 1895, that the treasure came to light at Boscoreale. The excavations there had been practically concluded, the workmen had just been paid for their week, and the following week were to be dismissed. The plan of the cellar had been fully made out, but just before leaving, they decided to clear out a well full of debris. One of the men went down the well and came up hastily, pretending to be ill from the bad air. The fact was, he had lighted on the treasure and desired to keep it secret. It is owing to his presence of mind that the "treasure" was safely smuggled out of Italy and reached the Louvre. On May 23rd it was offered for purchase to the Louvre at a price of 500,000 fr. (£20,000). The Conseil des Musées could only offer £10,000, and gave up all hope. On June 22, a telegram was received, stating that M. Edmond de Rothschild had bought the "treasure" and presented it to the Louvre. The "treasure" is now exposed in a special case in the centre of the Salle des Bijoux Antiques. —*Builder*.

THE "MOSCHOPHOROS" OF THE ACROPOLIS.—No archaic figure of the ancient Greek art is more familiar to the general public, through photographs, casts, and reproductions, than the "calf-carrier" of the Acropolis. This well-known figure has just received a new and, we think, convincing interpretation. In 1887, in the Acropolis excavations, the basis of the statue was discovered, and it told us the name of the dedicator—at least, within one letter—Kombos or Rhombos, but nothing about the reason of the "calf-carrying." It has generally been supposed that the calf was simply carried for sacrifice by the dedicator. Dr. Maas, of Fribourg ("Philologos" LVIII, Heft. 1), calls attention to the fact, that a bull was the prize for a dithyrambic contest, a goat for tragedy, and that, if his reading of Aristophanes' "Acharnians" 13 ff., is to be followed, a calf was the prize for a Kitharædus, a lyre player. This was later

commuted to a golden crown worth 1,000 drachmas, and 500 drachmas in silver—a very great advance. Dr. Maas thinks that the “calf-carrier” represents a successful lyre player carrying his prize.—*Builder*.

KILLARNEY.—We are fully in sympathy with the opinions expressed and the resolutions moved at the meeting of the “National Trust,” last week, in favour of the purchase of the Muckross Estate, either out of public funds or by subscription, in order to preserve the beauty of Killarney intact. We do not see any reason, on principle, why public money should not be expended on such an object, as the United States Government set the example, on a much larger scale, in the purchase of Yellowstone Park; though we observe that Mr. Balfour, when the point was mentioned subsequently in Parliament, offered no encouragement to the idea, merely replying that he was aware that the suggestion had been made. It would be more fitting in every way that this public benefit should be secured by public funds than by a subscription of wealthy donors, if such could be found. It is to be hoped something will be done; we cannot afford to have Killarney made a site for “eligible villas.”—*Builder*.

THE ROYAL COLLEGE OF SCIENCE, DUBLIN.—The committee appointed by the Lord President of the Council in 1897, to inquire into the buildings and site of the Royal College of Science for Ireland, have reported that in their opinion, the existing college is too small, and is inconveniently situated (the house stands on the east side of St. Stephen's Green, and was built by Lord Chancellor Saurin). The committee recommend that a fresh site should be taken adjoining the Science and Art Museum in Kildare Street, and extending from Kildare Place to Upper Merrion Street, with entrances therefrom; that the present natural history wing of the museum should be continued to Merrion Street, and that the museum annexe with some of its workshops should be transferred to the new college. The Science and Art Museum and National Library, designed, in competition, by Sir Thomas N. Deane & Son, stand in Kildare Street, to the right and left, respectively, of Old Leinster House (Richard Cassel, Architect, 1745), now occupied by the Royal Society of Dublin; one of the two gallery blocks, designed by the late Captain Fowke, R.E., and C. Lanyon (1859), flanking the rear façade of Leinster House, forms the present natural history department of the Museum.—*Builder*.



CHURCH OF ST. BRIGID, CLONAKENNY.

SCARCELY a year has elapsed since the foundation stone was laid of St. Brigid's R. C. Church at Clonakenny, which is about 5 miles from Roscrea and 7 from Templemore. It was recently dedicated by Right Rev. Dr. McRedmond, R. C. Bishop of Killaloe. It is not often that church buildings are carried out so rapidly. In this case it is understood that speed was essential, as the old structure, never very substantial, plainly showed that a century's wear and tear was all it could bear. Indeed, its condition portended danger to worshippers. Such was its state when the Rev. M. B. Curry, then Dean White's curate in Nenagh, was placed in charge, and, being of an energetic character, he quickly found ways and means of providing funds. Mr. Walter G. Doolin, M.A., was the appointed architect, and Mr. J. Sisk, of Cork, the builder, both of whom were associated in the erection of Nenagh Chapel. Between them they have

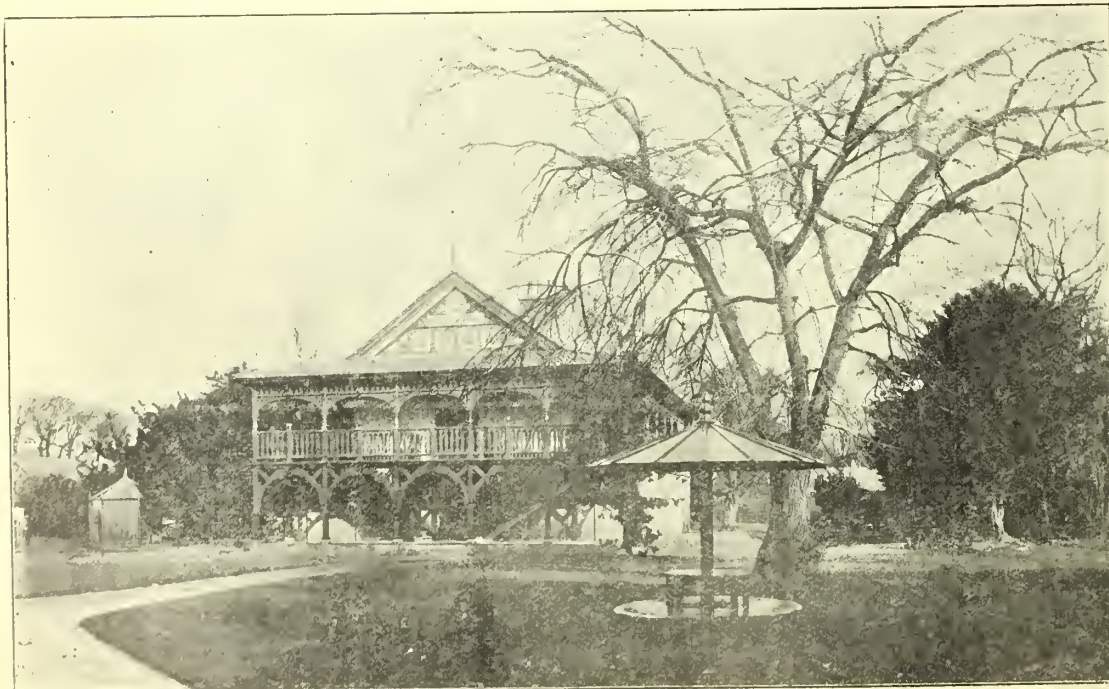
erected a neat edifice. It is in the free Romanesque style. On the west front is a bold, recessed moulded doorway; two double light windows, with a rose one, are over this, the whole terminating in an ornate gable belfry. A porch opens into the sanctuary on the south side, where is also the sacristy. The roof is a strong-framed, tie-beam, further strengthened by a curved rib, and panelled in pitch pine. The general appearance of the interior is suggestive of simplicity, and the size of the building may be judged from the dimensions of the nave—eighty feet by thirty. Our picture gives a just illustration of the structure. The dedicatory ceremony was performed by Dr. McRedmond.

By the kind courtesy of the proprietors of the *King's County Chronicle* we are enabled to publish the accompanying view, taken from a sketch specially made for them.

#### HAUGHTON MEMORIAL—ROYAL ZOOLOGICAL SOCIETY

Consists, on the ground floor, of ten inner dens viewed from a central passage. Outside of these dens are covered yards, and the end dens run up to the verandas, from which the animals can be seen. One side is devoted to kangaroos and the other to birds, including British birds. There is a large tea-room on the first floor approached by a double staircase, and is surrounded on three sides by verandas.

There is a pantry and kitchen in connection with the tea-room. The building was opened by His Excellency Lord Cadogan, and a silver key was presented to him by the architect on the occasion. The Haughton Memorial House was erected from designs by Mr. L. A. McDonnell, and the work was carried out by Mr. John Good. The iron work and heating of the cages was done by Messrs. Kennan and Sons.



ANNALS OF MONKSTOWN  
AND  
SOME NEIGHBOURING PARISHES  
IN THE COUNTY OF DUBLIN.

BY FRANCIS ELLINGTON BALL, M.R.I.A.  
F.R.S.A.I.

CHAPTER III.—continued.

A.D. 1225 to 1366.

1230. Geoffrey Tirrell and his wife, Sara, surrendered the lands of Leperstown, now known as Leopardstown, to the Leper Hospital of St. Stephen in Dublin.—*Journal R.S.A.I.*, for 1894, p. 166.

1230. Luke, Archbishop of Dublin, confirmed to the Prior and Canons of Holy Trinity Church, the grant of his predecessors including Kill-of-the-Grange and the adjoining lands, Killiney, Tully, part of Carrickmines and Ballyogan.—*Christ Church Deed*, No. 44.

1230. The Prior of Holy Trinity leased to Geoffrey Tirrell the land held by John Comyn in Ballyogan at a rent of £5. If the Priory recovered land in dispute with Sir Walter de Rideleford, Tirrell was to hold it with Ballyogan.—*Christ Church Deed*, No. 486.

1235. The Sheriff of the County Dublin returned in his account 6s. 8d., being the "rent of Dalkeia for a hawk." *Journal R.S.A.I.* for 1894, p. 173.

1240. The Priory of Lismullen, in the county Meath, was founded, and became possessed of the lands of Cornel's Court, near Cabinteely. Archdall's *Monasticon Hibernicum*.

1240. Luke, Archbishop of Dublin, confirmed to the Prior and Canons of the Holy Trinity the Churches of Kill-of-the-Grange, with the chapel of Monkstown, Dalkey, Killiney, Tully, and the chapel of Stillorgan; and the Dean and Chapter of St. Patrick's ratified the collation to the Priory. *Christ Church Deeds*, Nos. 51, 52.

1243. Raymond Carew, junior, leased to the Priory of the Holy Trinity a carucate of land "in his tenement of Stillorgan, near Dundrum." *Hist. MSS. Com.*, 10th Rept., App. pt. v., p. 212.

1244. John Strange, justiciary of Chester, was ordered to have 60 does and 20 bucks taken alive in the King's parks nearest to the port of Chester and sent to the port of Dalkey to stock the King's park of Glenecree. Sweetman's *Calendar of Documents relating to Ireland*, 1171-1251, No. 2,671.

1245. Pope Innocent IV. confirmed to Holy Trinity Church, the churches of Kill-of-the-Grange, Dalkey, Killiney, and Tully. *Christ Church Deed*, No. 53.

1272. The owner of Stillorgan paid to the Crown, in lieu of providing armed horsemen, 60s. "for one service and a half." *Journal R.S.A.I.* for 1894, p. 173.

1273. Reginald Talbot was summoned to attend a great council in Dublin in right of his estate in Dalkey. D'Alton's *Hist. of the Co. Dublin*, p. 887.

1281. In the receipts of Hilary Term Elias de Kilmacud is returned as paying two sums to the Crown in respect of Westpalston. Sweetman's *Calendar of Documents relating to Ireland*, 1252-84, p. 572. Westpalston, which is on the north side of Dublin, probably belonged, like Kilmacud, to the Convent of Graney. At the time of its dissolution the Convent owned land at Donabate, which is not far from Westpalston. Elias was possibly the agent as chaplain of the Convent at Kilmacud.

1282. Robert de Trim, of Dublin, clerk, granted to Holy Trinity Church "Tyrconry," near Kill-of-the-Grange, which had been granted to him by Ralph, son of William Brecon, for 40s. and a rent of 2/3 to the chief lords of the fee, and a clove of gilliflowers to the grantor. *Christ Church Deeds*, Nos. 127, 128, 521.

1294. In a taxation of the Diocese of Dublin, the manor and church of Kill-of-the-Grange, with their members, are returned as unable to sustain the charges; the church of Kilmacud is valued at 4 marks, and the temporalities of the monks at Monkstown are valued at nothing "on account of war." *Christ Church Deed*, No. 150.

1295. In the Michaelmas "Roll of Service," William Hackett is returned as the owner of Stillorgan, for which he paid one mark. Sweetman's *Calendar of Documents relating to Ireland*, 1293-1301, p. 108.

1305. In proceedings with respect to dues on wines, the jury found that no large ships could touch at the port of Dublin until they were partly discharged, and that ships laden with wines were wont to partly discharge their cargoes at Dalkey before proceeding to Dublin, the wines so discharged being brought to Dublin in small barks. *Ibid.*, 1302-7, No. 431.

1306. The church of Kilmacud was valued at £6. *Ibid.*, 1302-7, No. 239.

1306. Of the seven carucates of land in the manor of Kill-of-the-Grange, two were let with a mill for £14 13s. 4d., one for £4 10s. 0d., and one at Tully for £6. The three remaining carucates, which were retained by the Priory, were valued at £18, and the church, "with the chapel attached," was stated to be worth £18 3s. 4d. Mills's *Account Roll of the Holy Trinity*, p. 201.

1306. A complaint was made that the wines sent to the King from Ireland, probably as tribute or custom, were "bad mixed and for the greater part sour," and it was found that they were shipped about Michaelmas at Bordeaux, and were, after All Saints' Day, landed at Dalkey, where they were re-shipped to "Skenbunness," and were tossed about by tempests until the Epiphany, and that the deterioration of the wines was due to this cause. D'Alton's *Hist. of the County Dublin*, p. 888.

1308. Dermot Odyney was killed at Tully by the servants of Peter Gaveston, then Viceroy of Ireland. Gilbert's *Chartularies of St. Mary's Abbey*, vol. ii., p. 338.

1312. William, Abbot of St. Mary's, his monks and servants, were pardoned by the Crown for having negotiated with "Irish enemies of the King of England" to obtain restitution of goods carried away from the granges of the Abbey at Monkstown and Bullock. Gilbert's *Chartularies of St. Mary's Abbey*, vol. i., pp. xl, 275.

1320. The Priory of the Holy Trinity leased Tipperstown to John, son of Walter and Letitia White. He was bound to make suit at the Prior's Court at Kill-of-the-Grange and to perform all other accustomed services. Mills's *Account Roll of the Priory*, p. 172.

1320. Alice, daughter of Geoffrey, formerly wife of John de Dundrum, re-leased to Andrew Fitz Richard, on his marriage with her daughter Eva, a house at Dalkey, "the frontage looking from the sanctuary and lying on the western side of Dalkey Church." *Christ Church Deed*, No. 557.

1323. The Mayor of Dover received the Royal command to send shipping to Dalkey to convey arms and provisions for the service of the expedition to Scotland. D'Alton's *Hist. of the Co. Dublin*, p. 888.

1325. The Prior and Canons of Holy Trinity Church signified their intention of appealing to the Apostolic See against the claim of Richard de St. Leodgario, Archdeacon of Dublin, to visit their churches of Dalkey and Stillorgan. *Christ Church Deed*, No. 219. In Gilbert's *Chartularies of St. Mary's Abbey*, vol. i., page 528, there is a citation from the Archdeacon to "the discreet man, the parochial chaplain of Dalkey," to attend in the Church of St. Patrick, Dublin.

1326. Amongst the tenants of the Priory of the Holy Trinity were Gregory Taunton, for land near Cornelscourt; Peter Howell, for Murphysstown; Robert, son of Stephen and Gilbert Begg, for "Fernecosten;" Sir

Ralph, the chaplain, for the church lands at Stillorgan; John White, for Tippers-town; Maurice Howell, for Carrickmines and Brennanstown; David Macnebury, for land at Tully; John Miles, for Killiney; and John Kendal, for a holding at Dalkey. There were two villages at Kill of the Grange, called "the town of the church" and "the town of the grange." In the former there were eleven tenants, including the clerk, and in the latter thirty-five, including the bailiff, the weaver, two smiths, and "the chamberlain." Mills's *Account Roll of the Priory*, pp. 194 to 198.

1337. King Edward confirmed Dalkey, with its church and tithes, to the See of Dublin. D'Alton's *Hist. of the Co. Dublin*, p. 888.

1337-1346. See *Account Roll of the Priory of the Holy Trinity, Dublin*, edited by James Mills, M.R.I.A., as the extra volume of the Royal Society of Antiquaries of Ireland, for 1890-91, for numerous references to the Priory's lands and tenants at Kill-of-the-Grange, also for the account of John Chamberlain, the bailiff at Kill-of-the-Grange "of all receipts, disbursements, and payments there made by him."

1339. The Archbishop of Dublin established the right of the Archdeacon to proxies, or visitation fees, for the church of Kill-of-the-Grange with its chapels, and for the church of Tully. *Christ Church Deed*, No. 232.

1344. "Sir Thomas" was chaplain of Tully. Mills's *Account Roll of the Priory*, p. 68.

1346. The right of St. Mary's Abbey to tolls from fishing boats making use of the port of Bullock was established in this year. The Abbot proved, in a suit before Walter de Bermingham, justiciary, that Bullock was in the manor of Carrickbrennan, i.e., Monkstown held by the Abbey under charter from Henry II., and that from the time of the charter the Abbot's officials had exercised the right of selecting one fish from every vessel which made use of the port. Gilbert's *Chartularies of St. Mary's Abbey*, pp. xlii., 307-310.

1348. A remarkable pestilence, which devastated Ireland, first broke out at Howth and Dalkey. In Dublin alone, from the beginning of August to Christmas, 14,000 persons are said to have perished. D'Alton's *Hist. of the Co. Dublin*, p. 133.

1349. The Abbot of St. Mary's undertook to maintain near Monkstown two mailed horsemen and six light horsemen in aid of the king's garrison at Bray, to resist the incursions of the O'Byrnes and O'Tooles. Gilbert's *Chartularies of St. Mary's Abbey*, vol. i., pp. xliii., 302.

1352. The Priory of the Holy Trinity leased the lands of Tipperstown to Robert Hackett. He was bound to plough both at winter and spring seed time upon the Priory farm at Kill-of-the-Grange; to reap, to carry corn with his carts or cars; to give ale as often as he brewed, and to render suit at the manor court. See Mills's *Account Roll of the Priory*, pp. 107, 173, where Hackett's lease is printed at length.

1360. The provost and bailiffs of Dalkey were ordered to permit the departure of a Spanish ship which had been stopped to convey the Prior of the Priory of St. John of Jerusalem, who was then Chancellor of Ireland, as he was not prepared to travel at that time. D'Alton's *Hist. of the Co. Dublin*, p. 388.

1363. The Abbot of St. Mary's Abbey sued William and Walter Walfre for wasting and destroying lands at Monkstown, which had been demised to them. Archdall's *Monasticon Hibernicum*, edited by Moran, vol. i., p. 313.

1366. The Priory of the Holy Trinity leased to Sir Andrew Wythir, chaplain, the lands of Tipperstown. *Christ Church Deed*, No. 701.

(To be continued.)

## Legal Items.

INJUNCTION MOTION AGAINST MESSRS.  
H. AND J. MARTIN.

Last week the Vice-Chancellor continued the hearing of the case of Michael Kiernan v. H. and J. Martin, Building Contractors, which was brought for an injunction compelling defendants, amongst other things, to remove a wooden shed near Grand Canal Street, which, it was alleged, interfered with the access of light and air to a house of plaintiffs'; and also to remove a stationary steam-engine, a mortar-mill, and a saw-mill used by defendants in their business as builders and contractors.

Judgment was reserved in order to see if the parties could come to a settlement.

The MacDermot, Q.C., Mr. Kehoe, Q.C., Mr. O'Brien, Q.C., and Mr. J. J. Clancy (instructed by Mr. W. T. Sheridan) appeared for plaintiff. Mr. Sergeant Dodd and Mr. Brunskill (instructed by Messrs. A. and J. Robinson) appeared for defendants.

Messrs. George P. Sheridan, A.R.I.B.A., and Cecil Orr, A.R.I.B.A., F.S.I., were the plaintiff's expert witnesses.

While Messrs. Albert E. Murray and W. M. Mitchell, Architects, were examined for the defendant.

ACTION AGAINST ARCHITECTS AT  
LIVERPOOL.

AN action involving very serious issues, was recently decided at Liverpool, after a trial extending over many days. The Guardians of the Toxoth Workhouse were the plaintiffs; and Messrs. Ellison, their architects, were the defendants. The allegation was that the defendants had, by negligence, involved the plaintiffs in a very large bill for extras. The whole question turned upon the method of taking out the quantities. It was found that they had been "loaded" or taken to the full extent of £1,065. The explanation of the architects (who also acted as quantity surveyors), was, that this was done to provide against possible contingencies in the way of claims for extras.

MR. W. H. BYRNE has been appointed to succeed the late Mr. Hague as architect to several works left unfinished at the time of the latter gentleman's death. They include the New Church and the Cathedral, Kilkenny, and an important ecclesiastical work in Co. Meath.

OUR contemporary, *The Builder*, of last week, contains an interesting selection of illustrations of the works of Mr. Bodley, the Royal Gold Medallist, as well as an excellent portrait.

## OBITUARY.

WE deeply regret to announce the death of Professor Bannister Fletcher, D.L., F.R.I.B.A., etc. The deceased gentleman was first admitted an Associate of the R.I.B.A. in 1860, and a Fellow in 1876. He was professor and lecturer for many years at King's College, London, and had built up an extensive and varied practice as an architect. It is only a few months since he delivered a lecture at the Royal University of Ireland on the subject of sanitary buildings, and then expressed a hope of visiting Ireland soon again. He was the author of many standard professional text-books.

## Correspondence.

## TO THE EDITOR IRISH BUILDER.

DEAR SIR,—It is gratifying news to builders, and also, I am sure, to the architectural profession, to learn that the practically defunct IRISH BUILDER has changed hands, and passed to a new management, and that it has been resuscitated and very considerably improved, even in its first and second issue since the change took place.

I am also glad to notice that it is intended to introduce considerable improvements, and to run it on the up-to-date lines of the London technical journals. If this be true, it will be a great boon to builders who have at present to wade through all the daily and weekly papers for advertisements of contracts open to competition. It is a well known fact that different sections of the public advertise in the different daily and weekly papers according to their religious and political leanings, and hence the necessity of wading through and watching all the papers to obtain the required information.

It is very seldom that the builders of one city or town know what is going on in another town or district for want of a journal devoted to the interests of the building trades and profession of architects.

It is to be hoped that the re-juvenated IRISH BUILDER will be run on the lines of the London journals of the same class in which religion or politics enter not, and where even-handed justice is meted out to all, and in which every one and his work will be fairly treated according to merit, and merit only. Yours truly,

"A BUILDER."

## WARNING TO INVESTORS.

## TO THE EDITOR IRISH BUILDER.

SIR,—Kindly allow us to warn inventors and others interested against the operations of the so-called *Parisian Inventors' Academy*.

Certain speculators trading under this designation are in the habit of addressing communications to every inventor whose name appears in the official journal informing him that the *Council*, having considered the merits of his invention, have been pleased to confer upon him the honour (?) of election as member of the Academy, and have awarded him a "great gold medal." This would be a harmless intimation if the "Academy" stopped here, but the sting of communication is in its tail, the inventor being informed that although the honourable title will involve no expense; if he wants to receive the *diploma and medal*, he must send £2 to cover admission fees, freight, &c. Many inventors being very sanguine persons, and fully imbued with the importance of their own ideas, are naturally carried away by this *apparent* distinction, and are induced to part with their money.

For this sum a disc of metal *gilded* and a fanciful piece of paper are forwarded, the lot probably not costing the Academy 4/- or 5/-.

The whole thing is a humbug, and is simply a repetition in another form of the "free portrait" dodge.

The man who expects to get something for nothing, even if that something be only the title of "Member of the Parisian Inventors' Academy," with the award of a "great gold medal," will be about as much mistaken, as such people are likely to be.

We trust none of our friends will be deceived by the allurements. Yours, &c.,

J. K. FAHIE & SON.

Patent Office, 9 Westland Row.  
Dublin, 4th July, 1899.

## TO THE EDITOR IRISH BUILDER.

DEAR SIR,—Could you inform me, through the medium of your Journal, as to what you consider the best and simplest form of architect's account books, and where same can be procured.

I notice a series of articles on the subject now appearing in a London journal, but the system propounded appears to me to be too full and too complicated, and that the simpler the form of such accounts the better, and the better chance there is of their being kept properly. I have read similar articles in the *Building News* some years ago.

If I am not mistaken a paper has been read some time ago at the Irish Institution or Architectural Association on the subject by one of the members. Would it not be well if this paper could be published for the benefit of young architects? Yours, &c.,

"YOUNG ARCHITECT."

[We have noticed the articles in a contemporary to which our correspondent refers. We do not agree with him that the system is "too complicated" or "too full," we consider it a well thought out arrangement. It is suited to the requirements of a pretty large practice. For any architect who keeps his own books, and who naturally has but little time to spare, certain modifications would be necessary. For instance, a well-kept whole page diary saves much clerical work in a moderate practice.

We think the following books the minimum for even a small practice:

- (a) Cash Book, in which all receipts and disbursements are entered.
- (b) Ledger.
- (c) Inspection Book.
- (d) Register of Documents. All documents sent out or received entered.
- (e) Diary, large size, used as instructions book, postage book, and rough journal.

Separate letter books for accounts, ordinary correspondence, special jobs.

Petty Cash Book.

A very able paper was read before the Architectural Association of Ireland during the session of 1898 by Mr. Kaye Parry, M.A. We are in hopes of publishing a series of articles ourselves on this important subject later on. Meanwhile, our correspondent cannot do better than study the series to which he alludes.—Ed.]

ARTS AND CRAFTS SOCIETY OF  
IRELAND.

## PRIZE COMPETITION.

WE publish particulars of prizes offered by the Arts and Crafts Society for designs for a catalogue cover.

We trust that there will be a good competition, and we hope that the establishment of the Arts and Crafts Society will lead to the formation of a school of black and white and decorative designers in Ireland. There must be ample material to be found for such, if the energies of the students of the Schools of Art and others are stimulated in the right direction.

Exhibition Catalogue Cover Design.  
Prizes—4 guineas, 2 guineas, 1 guinea.

Exhibition Poster Design. Prize—5 guineas.

Apply for conditions to—The Hon. Secretary, 15 Kildare Street, Dublin.

THE ARCHITECTURAL ASSOCIATION  
OF IRELAND.PRIZE COMPETITION FOR MEASURED  
DRAWINGS.

WE are requested to state that the last day for receiving drawings in the above competition has been extended to Thursday, 20th July, inst.

# ARCHITECTURE.

## ENGINEERING.

### WHAT OUR FRIENDS SAY.

*The Irish Builder* of July the 1st appears in new and more attractive guise. The proprietorship of this old-established technical journal has recently changed hands. We notice that the new controllers intend to introduce into their publication many novel features certain to invite a wide circulation. It is proposed to make a special feature of ecclesiastical notes and articles on ecclesiastical art, with special reference to modern work in progress or in contemplation, articles on mediæval and contemporary art, etc.—*Daily Nation*, 30th June.

*The Irish Builder*, which claims as its special province architecture, archaeology, engineering, sanitation, etc., arts and handicrafts, begins with the present issue a new and improved series. It is well written, clearly printed, and bound in a handsome tinted cover, and should prove, especially with its new features, a publication of exceptional interest to the architectural profession and to all engaged in the building trade. We are glad to notice that it is intended to make *The Irish Builder* a medium for promoting and assisting native art and industries, a good work in which it will doubtless be able to exercise a valuable influence.—*Freeman's Journal*, 30th June.

I have much pleasure in stating that *The Irish Builder*, which has recently been purchased from Mr. Roe, will be improved and enlarged under the new proprietorship. This fortnightly, which is the oldest journal of the kind in Ireland, already shows indications of the health and vigour, which will, I hope, follow the introduction of new blood. Architects, builders, and contractors, long ago acknowledged their indebtedness to this paper, which was established nearly fifty years ago, and I wish it marked success on its start on a fresh career of usefulness.—“Sydney Brooks,” in *Irish Figaro*, July 8th.

## *The Irish Builder*

Under New Management.

Offices:

PALATINE CHAMBERS,  
63 DAWSON STREET,  
DUBLIN.

All Business Communications to be addressed to the

“IRISH BUILDER.”

Editorial Communications to

THE EDITOR

The Journal is an old established one, dating uninterruptedly from the year 1859. It is in contemplation to greatly enlarge and improve it both in regard to matter and scope.

The Proprietors confidently look to the public for support in their effort to provide a thoroughly readable, up-to-date technical journal in Ireland of a broad character, tending to promote and assist Native Industries, and the Arts and Handicrafts of the country generally. Having regard to the fact that the Paper has so long enjoyed a considerable circulation amongst the Architectural Profession, Builders and Contractors generally (an appreciation which the Management hopes to continue to merit in an increased measure), the Journal offers to Advertisers, and in particular Administrative Boards, an especially useful and direct method of Advertising. The Scale of Charges will be found reasonable.

Liberal reduction according to number of Insertions.

Advertisements should reach the Office two days before date of publication.

Published on 1st and 15th of every Month.

Advertisers blocks inserted.

## CONTRACTING.

### WHAT OUR FRIENDS SAY.

Our old established contemporary, *The Irish Builder*, is now under new management. The paper has been in existence for close on half a century, and for the last forty years has been owned and most ably edited by Mr. Peter Roe. Mr. Roe has now been compelled by advancing years to sever his active connection with the paper. Our contemporary was established in 1850 by Mr. Lyons, an architect well known in his day, and the present management have decided upon enlarging and improving it. The paper in its improved form proposes to deal not only with building, but the kindred arts and crafts—the fine arts generally, electric lighting, the antiquities of Ireland, native industries, &c. We heartily wish all success to this new venture, which supplies the wants of the members of the profession in Ireland. Nothing much up to the present has been heard of the smaller buildings put up in Ireland; we hear of the churches built there, but that is about all. We hope this journal will supply such news, for anything calculated to arouse further interest in domestic architecture deserves success.—*Builder's Journal*, June 28th.

*The Irish Builder*, which is the only journal in Ireland dealing with technical subjects, has recently passed under new management, who have several important improvements in contemplation. It is intended to permanently enlarge the paper, so that many interesting features may be introduced, which will make it in every respect a journal worthy of the patronage of all interested in architectural and technical matters generally. The object of *The Irish Builder* is to provide a thoroughly up-to-date technical journal in Ireland of a broad character, tending to promote and assist native industries and the arts and handicrafts of the country. The present issue appears in a tinted cover, which adds very much to the attractive appearance of the paper. Among the new arrangements a very interesting feature is the London Letter, the first of which appears in the current issue. A special feature also will be notes and articles on ecclesiastical art.—*Irish Daily Independent*, 30th June.

# ARCHÆOLOGY.

## ARTS AND CRAFTS.

## LOCAL GOVERNMENT NEWS.

## STUDENTS' COLUMN.

## ECCLESIOLOGICAL NOTES.

## HISTORY OF ST. WOLSTAN'S.

(Continued from page 76.)

## FAMILY OF ALEN.

PATRICK ALEN, *m.* (2ndly) Anne, *dan.* and heiress of Sir Luke Dowdall, Bart., of Athlunmy, county Meath (by Mary his wife, *dan.* of Daniel Byrne, Esq., of Cabinteely, county Dublin), and had issue by her (who *d.* at. 52) five sons and eight *daus.*

V. Anthony, of Irishtown, county Dublin, and Pollardstown, county Kildare (will dated 24th April; pr. 6th March, 1752); *m.* Mary, *dan.* and heir of Ulick Wall, Esq., of Pollardstown, county of Kildare, by whom he had issue two sons and three *daus.*

(1) Ulick-Wall Alen, of the city of Dublin, who *m.* Anne, *dan.* of George McNamara, of Cong, county Mayo, but dying *s.p.* his estates in the counties of Dublin and Kildare (St. Wolstan's excepted), devolved upon his cousin, LUKE JOHN PATRICK ALEN (see below).

(II). Patrick, *d. s.p.*

(1). Anne, *m.* to — Gilfoyle.

(2). Mary; (3) Margaret, and (4) Jane.

VI. Luke, of whom presently.

VII. Michael, *d. unm.*

VIII. — *d. young.*

(4). Lucy, *m.* to Hugh O'Rielly, of Milltown, county Meath.

(5). Catherine.

(6). Aminet, *m.* Stafford Hussey, Esq., Rathkenny, county Meath.

(7). — *d. young.*

(8). — *d. young.*

## PETITION OF PATRICK ALEN.

(Penal Laws prohibiting Roman Catholics sending their children to Foreign Parts.)

The following Petition of Patrick Alen, Esq., of Alencourt, *alias* St. Wolstan's, was presented on the 6th of August, 1717, to their Excellencies the Lords Justices of Ireland, praying to be allowed to send three of his daughters to the Continent to be educated, &c., but was dismissed on the 17th of same month.

"To their Excellencies the Lords Justices and Council of Ireland.

"The Humble Petition of Patrick Alen of Alencourt, *alias* St. Wolstan's in the County of Kildare, Esq.

"Humbly Sheweth—

"That your Petitioner being a Roman Catholic with a numerous issue and likely to have more; and having but a small fortune to make provision for them, is desirous to send three of his eight daughters, vizt.: Catherin, Aminett, and Lucy, into Forreigne parts where your Petitioner has relations who would take care of their education and preferment. But in regard there are laws in force to prevent the sending of Roman Catholic's children into florreigne parts without spetial licence for that purpose from his Majestie or his Chief Governor or Governors of this Kingdom and four or more of his Maties privi Councill of the same; your Petitioner would not presume to send any of his children into florreigne parts contrary to the purport of such laws without such licence.

"May it therefore pleas your Excellencies and the Right Honourable the privi councill to grant unto your Petitioner a Licence for sending his said three daughters into florreigne parts to be provided for as aforesaid.

"And y<sup>r</sup> Petitioner will ever Pray.

"PATRICK ALEN."

We now return to Patrick Alen's second son by his second wife,

LUKE ALEN, who entering the French Service in 1735, obtained a Lieutenantcy in Colonel Dillon's Regiment, and passed from that Corps, soon after the Battle of Fontenoy, into Lally's. In 1756, Lieutenant Alen received the Order of St. Louis; and, in the following year, was

appointed Major-General of the Army in India; where, at the capture of the Fort of Sacramalowes, he gallantly distinguished himself, and was the first to enter the breach. In 1760, during the Siege of Pondicherry, General Alen was detached with 400 Light Cavalry, to retard the enemy's proceedings, and successfully accomplished the object.

"Of the French so detached," says the late John C. O'Callaghan, in his History of the Irish Brigade in the service of France, "or not shut up in Pondicherry, those assembled at Thiagar were so much superior to the little ports around, that they became the terror of the country, and their smallest parties brought in provisions in plenty, and without risque. With this force at Thiagar was Major-General Luke Alen, of the old family of St. Wolstan's, in the county of Kildare. The son of a mother who had twenty-one children, he passed into France in 1735 to enter the Irish Brigade; rose to be a Major in the Irish Regiment of Bulkeley, and a Chevalier of St. Louis; then served with the same rank in the regiment of Lally; was likewise nominated an Aide-Major-General to the army for India in 1757, and particularly signalized himself there in escalading the Fort of Sarzamalour by forcing his way into it, accompanied by one officer and twenty soldiers of the Regiment of Lorrain. On the night of December 3rd, taking with him all the cavalry at Thiagar, the Major posted himself in the hills westward of Trincomalee, with the view of joining Vizazpunt in marching for Pondicherry, should the pending treaty for that purpose be concluded with him; and, a few days after, these cavalry, uniting with the 100 European infantry last landed from Pondicherry at Tranquebar, and acting as a guard to the Envoy from Lally, empowered to conclude the negotiations for the relief of Pondicherry, the Envoy, thus doubly protected by horse and foot, succeeded in reaching the Mahratta's camp.

The year 1760 ended, and the year 1761 commenced, around Pondicherry, amidst a terrible storm of wind and rain, which raged with corresponding effects on sea and land, from 8 o'clock in the evening of December 31st to between three and four in the morning of January 1st. The English blockading squadron, then consisting of 8 ships of the line, 2 frigates, a fire-ship, and a store-vessel from Madras, in all 12 sail, were generally dispersed, shattered, or run aground, 3 being sent to the bottom, with 1,100 men. . . . But the superior resources and characteristic energy of the English in naval matters so soon repaired the damage inflicted by sea, that in a week after the storm, which had raised such hopes of deliverance in the garrison of Pondicherry, the blockade of the harbour was resumed by Rear-Admiral Stevens, with 11 sail of the line and 2 frigates. . . . From the 6th of January to the 9th the besiegers worked at a commanding redoubt, on a spit of sand, to mount 16 guns and containing 400 men, and laboured to complete the Hanover battery, which the artillery from the town strove to interrupt, though with little effect; and supplies of siege-cannon, ammunition, and stores, to repair recent losses by the storm, were forwarded by sea from Madras. By the 9th, too, information reached the English which freed them from any further alarm with respect to Vizazpunt and his Mahrattas; that potentate, on being offered so much better terms for agreeing to leave Pondicherry to its fate than the French could offer to induce him to aid them, having definitely declared they were to expect nothing from him. Upon this General Alen and his 200 European horse and 100 foot quitted the Mahratta camp, and a return to Pondicherry being then impossible, marched away to enter the service of Hyder Ali at Bangalore; the General, with his companions in

arms, being thus the only portion of the French force in India enabled by circumstances to act on the principle of "no surrender!"

After the fall of Pondicherry, General Alen, who had been wounded during the war, returned to France, but his corps was the last to quit the Indian soil, and the only one not made prisoner of war.

Major-General Luke Alen *m.* 5th Oct. 1762, Mademoiselle Marie-Charlotte Adelaide, *dan.* of Lieut.-General de Behague, Grand Cross of the Military Order of St. Louis (and sister to General Count de Behague, Governor-in-Chief of the French West India Islands in 1791), by whom he had issue, one son and five daughters:—

1. Luke-John-Patrick, of whom, presently,

1. Eleanor-Antoinette, *b.* 19 June, 1765.

2. Lucie-Julei, *m.* to John Henry de Vaillant, of Lignerolle, in Normandy.

3. Emily.

4. Charlotte-Adelaide, *b.* Sept., 1771, *m.* Louis Person, Chevalier of St. Louis, colonel of marine artillery.

5. Isabella Jeanne.

LUKE JOHN PATRICK ALEN, *b.* 26th Aug., 1775, a Lieut. Colonel in His Majesty's (King George III.) 55th regiment of foot, 1811, a Companion of the Most Hon. Military Order of the Bath, 1815; and, on the death of his cousin, Ulick Wall Allen, *ob. s.p.*, succeeded to the estates in the counties of Dublin, Wicklow, and Kildare (St. Wolstan's excepted), and to the Representation of the family. He *m.* Hannah-Marguerite, *dan.* of John-Richard Creagh, Esq., of St. Eustatius, in the West Indies (and sister to Richard Creagh, Esq., of Castle Park, County of Tipperary, Captain of 7th Hussars), by whom he had issue two sons Ulick-Randal-Heyliger, *b.* 3 Oct., 1800; *d. young*; and Luke John Henry.

Colonel Luke J. P. Alen died at his residence, No. 90, Lower Gardiner Street, Dublin, on the 13th March, 1841. His only surviving son,

LUKE-JOHN-HENRY ALEN, a Captain in the Army, *m.* Lucy Isabella, fifth *dan.* of Osborne Tylden, Esq., of Torry Hill, Milsted, County of Kent, and dying 1st January, 1879, he left issue two *daus.*

His death is thus announced in the *Freeman's Journal* of Friday, 3rd Jan., 1879:—

"DIED—At his residence, 16 Wellington Road, [Dublin], Luke John Henry Alen, late Captain, 74 Highlanders, son of the late Colonel Alen, C.B., and last male descendant of the ancient family of St. Wolstan's."

His two daughters were:—

I. AGUSTA M. ALEN, who *m.* John J. Mahon, Esq., of Handstead, County of Galway, by whom she has issue:—

I. Luke John Henry Slane Alen Mahon, *b.* 25 June, 1867.

II. John Charles Reginald Alen-Mahon, *b.* 1st June, 1868; *d.* 2nd March, 1871.

III. Randal Ulick Montague Patrick Alen Mahon, *b.* 12th April, 1878.

1. Augustus Isabella Monomia Alen-Mahon, *b.* January 10th, 1870.

2. Gertrude Imogene Alen-Mahon, *b.* July 3rd, 1871.

3. Zenobia Maude Lillian Alen-Mahon *b.* April 9th, 1874.

II. GERTRUDE LUCIE ISABELLA GEORGINA TYLDEN ALEN, of Montrose, Terenure, County Dublin, who is now the present representative of the ancient family of St. Wolstan's, County of Kildare, who occupied high positions in Ireland previous to the reign of Queen Elizabeth.

*Arms*: A chev., gu. betw. three ogresses, each charged with a talbot or, on a chief, arz, a lion passant betw. two crescents of the first.

*Crest*: Ademi-lion, party or and gu., collared and chained, holding a gilly-flower.

*Motto*: *Sertis et Sidelis.*

*To be continued.*

## Our London Letter.

THE death of Mr. Bannister Fletcher, F.R.I.B.A., M.S.A., D.L., etc., creates a void in the architectural world which will not easily be filled. The late Professor of Architecture and Building Construction at King's College, London, was a man of many accomplishments, and held, at various times, several official positions, including those of District Surveyor of West Newington, Surveyor to the Board of Trade, Chairman of the City of London Sanitary Committee, and of the Trades Training School Committee, President of a late Congress of the British Institute of Public Health, Col. of the 1st Tower Hamlet Volunteer Rifles, etc.; he was, also, a recognised authority on matters of professional practice, and author of many technical standard textbooks, on quantities, dilapidations, light and air, etc., etc. His many professional and other engagements did not, however, prevent him giving considerable attention to politics, as we find him in 1885, elected the Liberal member for the Chippenham Division of Wilts, though his parliamentary experience was brief, for in the following year he lost the seat to Lord Henry Bruce.

The wide circulation obtained by Mr. Fletcher's technical works was the means of rendering his name a most familiar one to the student and the qualified practitioner alike, while through his connection with King's College he has been able to exercise a personal influence upon many of those with whom will rest the responsibility of upholding and maintaining the honour and interests of the profession of architecture.

Mr. Fletcher, who was in his 66th year, died at his residence at Hampstead on July 5th.

"What poverty there must be in the architectural profession!" was the remark we overheard at the *Builder's Journal* exhibition of competitors' drawings for a country house recently inaugurated by that enterprising publication. The remark is capable of two constructions, one of which, at anyrate, would apply as regards the designs (?) as a whole. Out of some 130 sets of drawings only a very small percentage would appear to have been prepared by qualified architects. Some of them are plainly the work of the office boy, the builder's clerk, or the young gentleman with a "taste" for drawing and a School of Art training in planning and design. The motto has been "quantity not quality." In one instance a competitor with a genius for lettering has devoted more pains, and nearly as much space, to his title as to his design.

In making his award the assessor had undoubtedly been at considerable care and trouble, though we do not agree with the order in which he has placed the first three.

Mr. Herbert L. North, B.A., secures first place with a design which as nearly as possible fulfils the conditions, and is followed by Mr. H. P. Sharpe, whose work exhibits a good knowledge of planning, combined with artistic conception and good draftsmanship, though the drainage and cost are items which are left

to the imagination; the third premium goes to Mr. W. Mitchell, and is well bestowed, while a large number of drawings are commended. At the first glance one would think they had strayed into a flower show, seeing placards in conspicuous positions "highly commended," and "commended." It is to be hoped the authors of these designs will not take their meed of praise too seriously.

The exhibition as a whole gives one the impression that the subject set, a fascinating one in many respects, has been rather beyond the powers of the majority, though perhaps this may be accounted for by the instructions being a little vague.

Whether clients who seek for designs by such means as these obtain the best results, is open to question, though possibly a competition on these lines may bring grist to the architectural mill of the not-too-busy practitioner in an acceptable way.

We understand that further developments in this way may be looked for at an early date.

The example set by Miss Charles, A.R.I.B.A., seems likely to prove infectious, if we may judge by the list of successful June candidates for the preliminary Institute Examination, which contains the names of three ladies, one of whom hails from Belfast.

The lady architect may be all very well in theory, and as an addition to the office staff for tracing and general indoor work will, no doubt, compete successfully with the mere man; but what when it comes to supervising, measuring up, or any other work necessitating the use of scaffolding and ladders, and how will she face the British workman in the only costume possible for such gymnastics as are essential to the duties.

But possibly we are taking a too serious view of the matter, and the lady architect will confine herself to the artistic side of the profession and, after the manner of Mark Twain, employ agents to undertake that part of the work she is unfitted for or unwilling to do.

The conditions of competition for the new Band Stand at the Crystal Palace are not such as are likely to find favour among those at least whose time is of any value to them. True, the designs are to be adjudicated on by a Committee of the Board of Directors, advised by their Architect, and the premiums are fairly proportionate, but the Directors do not bind themselves to accept any designs, or to employ the author of any premiated design, though, should they do so, additional remuneration will be paid, but at what rate is not stated; also, the right is reserved to make what use of either of the premiated designs they think fit. There is one good point about the competition and that is, that no fee is asked for particulars, so that competitors will, at least, not have to pay for the privilege of deciding as to the desirability of competing.

The unveiling of a statue erected by old Rugbeians to perpetuate the memory of Judge Hughes, better known as the author of "Tom Brown's Schooldays," marks an epoch in the history of Rugby School. The statue is the work of Mr. J. Brock, R.A., and represents Judge Hughes in a short coat, standing bareheaded, with a stylus and writing tablets in either hand.

## Local Government Items.

**SOUTH DUBLIN UNION.**—The Commissioners of Public Works have written sanctioning a loan of £7,600 to the Council under the Labourer's Act for the purpose of a scheme of cottages.

**ARDEE DISTRICT COUNCIL No. 1.**—The consideration of the applications for labourers' cottages for Mansfieldstown electoral division was left over until after the above election, and the consideration of those for Stormanstown and Tallanstown electoral divisions were left over to the same time.

A letter from Mr. Campbell, District Councillor for Stabannon, who was unable to attend through illness, relative to the applications for labourers' cottages in his electoral division, was marked read, their further consideration having been adjourned.

**CARRICKMACROSS TOWN COMMISSIONERS. WATERWORKS.**—Mr Fennell criticised the Clerk of Works on not having the works completed before this. He (Mr. Fennell) inquired if there were any hydrants at the end of the pipes at Magheross.—The Chairman said there was not.—Mr. Fennell: You'll have to get an engineer or competent man to look after the waterworks right before we take them into Carrickmacross.—Chairman: We'll have to make arrangements that the reservoir be cleaned out once a month in summer-time, and once every three months in winter.—Mr. Fennell: Anything that you see isn't done should be done before we take them over. An ignorant man doesn't know what he is talking about; but there is a lot of talk over the same waterworks.

**CARLOW.**—At the weekly meeting of the Carlow Urban Council a notice of motion setting forth the desirability of erecting twenty-five artizans dwellings in the borough came up for consideration. The Chairman said that they owed their treasurer £1,379; they owed their solicitor £200, an account due to a local firm for £150, which, with the instalments on loans due in November, amount to £2,251. To meet this they had an outstanding rate of £300, which would leave a deficit at the end of the year of £1,400 odd. That sum, with balance of loans outstanding, would make a total liability of £16,753. An amendment that the motion be postponed for twelve months was carried by eight votes to two.

**Co. DUBLIN.**—A notice of motion was received at the last meeting of the Dublin County Council to take into consideration the salary of the County Surveyor, and the desirability of appointing assistant surveyors for the five rural divisions. It was further resolved: "That the secretary of the County Council be directed to write to the Lord Lieutenant, asking him to direct the Governors of the Richmond Lunatic Asylum to establish an auxiliary lunatic asylum on their new premises at Portrane, for the purpose of accommodating six hundred chronic harmless lunatics." (See section 76 Local Government Act, 1898.)

**DUNDALK UNION.**—THE DEAD HOUSE.—The report of the visiting committee recommending the erection of a sheeted fence between the dead-house and the nuns' garden, was read and adopted. It was also ordered, on the motion of Mr. B. Hamill, that the woodwork about the place be painted. In reply Mr. to Duffy, it was stated that this could be done by inmates

## Brevities.

THE death is announced of Mr. Bannister Fletcher, F.R.I.B.A., M.S.A., Professor of Architecture and Building Construction at King's College, London.

At a meeting of Architects in Sheffield on June 30th, convened by the Society of Architects, London, a resolution approving the principle of Statutory Registration was passed, a paper on the subject being read by Mr. Ellis Marsland, and one on "Light and Air," by Mr. T. W. L. Emden, J.P., L.C.C.

Good progress is being made with the new Archiepiscopal Palace at Canterbury; the building is situated westward of the Cathedral, and is of Early English design; in getting out foundations for the chapel wing some 13th century remains of monastic buildings were found, and these are to be preserved within the walls of the new building.

Mr. Silvanus Trevail, F.R.I.B.A., has just had a narrow escape from drowning. It appears he was being rowed in a dingy to a yacht in the Thames to inspect a patent steering gear, when the oarsman, in stepping on board the yacht, slipped his foot on the side of the dingy, swamping her and the occupant. Mr. Trevail, however, being a strong swimmer, managed to keep afloat until rescued by the river police, but not before he had lost his hat and spoilt a valuable watch.

An Exhibition of students' work is to be opened to the public at the Central School of Arts and Crafts, Regent Street, on July 10th, comprising bookbinding, silver, goldsmith's and jewellery work, chasing, engraving, enamelling, stained glass, ornamental lead-work, embroidery, wood carving, gilding, modelling, etc.

The school has been established nearly three years, and is intended to provide for apprentices, journeymen, and others engaged in the more artistic trades, such training—subsidiary to the workshop—as the student may require.

Paisley Abbey is to be restored under the direction of Dr. Rowland Anderson, the well-known Architect of Edinburgh, at a cost of about £13,000.

The R.I.B.A. June list of successful candidates contains the names of three ladies in the preliminary section.

The Chief Surveyor of the War Department, Mr. W. B. McDermott, having retired after 38 years' service, is succeeded by Mr. B. R. Tucker, M.S.A., who already, has seen over forty years' service both in England and abroad.

The Architectural Association recently paid a visit to Pangbourne, and inspected the Parish Church and houses in course of erection by Mr. Leonard Stokes and Mr. Belcher. The annual excursion in August is to Salisbury and neighbourhood. The surrounding country as well as the town itself gives plenty of scope for study and the judicious use of pencil and camera.

mon. Even, however, in such a large city there are probably not enough students of architecture to keep an important school going; and with that subject modelling, carving, copper and iron work, designing for stained glass, &c., are very fitly associated under one roof.

## THE ALEXANDRA COLLEGE.

THE additions to the Alexandra College, Earlsfort Terrace, are rapidly assuming shape; they have already given quite a Collegiate aspect to the rather bare exterior. The cusped and mullioned oriels are a pleasing feature, and show that the architect, Mr. R. Caulfield Orpen, has not studied the grand old quads of Oxford for nothing.

## THE ARTS AND CRAFTS SOCIETY OF IRELAND.

AN Exhibition will be held this year in Dublin. It will open in November.

The Senate of the Royal University of Ireland have kindly granted the use of the Royal University Buildings, Earlsfort Terrace, for this Arts and Crafts Exhibition.

The Exhibition will consist of Contemporary Original Work in Decorative Processes and Handicraft, such as:—

Architectural Designs, Lay and Ecclesiastical. Bell-founding. Bookbinding. Cabinet-making. Decorative Painting. Designs, Cartoons, and Working Drawings. Embroidery, Lay and Ecclesiastical, on Silk, Linen, or any other material. Engraving, Lithography, and the various Processes of Book Illustration. Fan Painting. Gesso, Stucco and Scraffito Work. Glass, including Stained Glass. Gold and Silversmiths' Work. Hammered Iron Work. Lace. Lapidary Work. Leather Work. Metal Work. Mosaic. Poplin-making. Porcelain and Pottery. Printing. Seal-cutting in Stone, Brass, and Steel. Stone and Marble Carving. Terra Cotta. Wall-paper Designs. Wood-carving. Wrought-Iron, besides miscellaneous Exhibits, to be approved by the Committee of Selection. Inventions or Mechanical contrivances are not, as such, admissible.

All Designs, Drawings and Cartoons must be framed, but not necessarily glazed. Textiles and Needlework must be either arranged as hangings or framed. Framed Exhibits of printed, woven, stamped, or other manufactured materials, must be shown in the single width only, and should be one yard in length. In case of Designs not complete in the single width, a double width will be permitted, and a length of five feet.

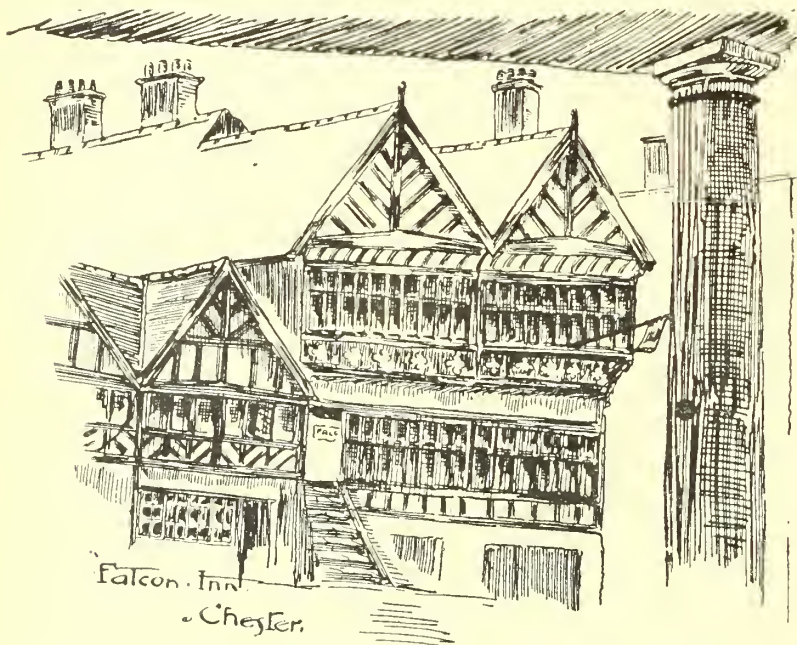
All work, intended for Exhibition, must be delivered not later than the 15th October, carriage paid, at the Galleries.

In forwarding work for Exhibition, the Exhibitor must attach to each separate work, on a label to be supplied by the Secretary, the following particulars, to be used in the construction of the Catalogue:—(a) Title or description of work. (b) Name or names of Designer. (c) Name or names of the Executant. (d) Name and address of Exhibitor. (e) Price, if for sale.

Copies of the Regulations and Forms will be supplied on application to the Hon. Secretary, Arts and Crafts Society of Ireland, No. 15 Kildare Street, Dublin, who will, we understand, be glad to answer all enquiries.

Subject to the Regulations, the Exhibition will be open to all Artists and Handicraftsmen resident in Ireland.

There will be a Loan Exhibition of retrospective Irish Arts and Crafts, and the Arts and Crafts Societies of England and Scotland.



## THE THREATENED STRIKE IN THE GRANITE QUARRIES.

WE are very pleased to learn that the dispute between the masters and the men in the Co. Dublin Granite Quarries, has been amicably settled. The masters have, we understand, conceded a further advance of 2s. a week, making a total increase of 6s. in the wages.

We are glad to know that what would have been nothing less than a great calamity, to all interested in the building trades, has been averted. We trust that a spirit of conciliation and mutual give and take will continue to prevail, and that both masters and men will reflect on the serious and lasting consequences of a strike, or a lock-out. Anything that operates to the serious disadvantage of the one side, must inevitably react on the other. The quarrying of native stone is comparatively a small industry, but it is one

of the few left to us, and we all have a right to ask both masters and men to look to it, that no precipitate action of theirs shall lead to its extinction.

## A SCHOOL OF ARCHITECTURE.

THE School of Architecture which was opened in Liverpool five years ago with 50 students, now has 175, and it will presently stand first among schools of its kind outside London. These are not many. Of all the greater branches of art, architecture is still the worst provided for in this country. But it is to be remarked that the Liverpool school attracts a great many more working craftsmen than architects' apprentices, who are doubtless used in Liverpool as elsewhere by all but the best of their masters, in the half-educated way that is too com-

# THE IRISH BUILDER.

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DUBLIN, AUGUST 1, 1899.

## COUNTY SURVEYORSHIPS.

### DERRY AND DOWN.

IN our issue of 1st July we animadverted upon the parsimonious attitude of the Londonderry County Council in attempting to reduce the salary of their County Surveyor from £600 to £250 a year; the former being the maximum amount for a first-class county under the Grand Jury Acts. To this the Local Government Board, in the absence of any specific reason for reduction, very properly demurred, and so the Council is now advertising for applications to fill up the vacancy, having finally fixed the salary at £350. This sum is far too small when we consider the onerous duties attached to the post, and the extensiveness of the district may be gauged when we mention that seven assistant surveyors are required in various parts of the county. The non-allowance for travelling has also been a real grievance. This is a large item in some counties, and averages £40 a year, which cannot be counterbalanced by the additional £50 for office expenses.

Candidates will be required to satisfy the Civil Service Commissioners, as heretofore, of their qualifications for the office.

Contrast with the foregoing, the liberality of the Down County Council, who simultaneously advertise for a County Surveyor at a salary of £800, to fill the vacancy caused by the appointment of Mr. P. C. Cowan, B.Sc., as Engineering Inspector to the Local Government Board. Co. Down may be more important than Co. Derry, for there are ten assistant surveyors in the former as against seven in the latter, but the salaries are certainly not in proportion. Can it be that the inhabitants of Down are more enlightened than those of Derry, and that they are long headed enough to foresee that more work and zeal and earnestness can be got out of a man when he is properly remunerated than when he is not? It is the principle of give and take, and Co. Down can all the more reasonably enforce that their officer's entire time shall be devoted to the public service without that official grumbling at the prohibition of private practice. Derry cannot well insist upon such an interdiction, for what civil engineer, with so manifold duties as those of a county surveyor, would consider himself adequately remunerated at £350

per annum? It is undoubtedly to the interests of the public service that County Surveyors should have respectable salaries and be called upon to devote their whole time to the duties of their post. Candidates who send in applications for Co. Derry will have their names returned to the Local Government Board, who will make out a list of nominations prior to examination by the Civil Service Commissioners. The limits of age are 26 to 40, and applicants will be required to show that they have been engaged in the practice of the profession in a responsible position in charge of important works for not less than four years.

Thus we are glad to note that the competitive system is to be retained, for its abolition would assuredly lead to loss of efficiency and open the door to wire-pulling and favouritism. Irish County Surveyors have to pass the most difficult technical examination in the United Kingdom, an ordeal, indeed, of which it may be said that no civil engineer need be ashamed to own that he failed in, and we should be sorry to see the status of so high-class a body of men needlessly lowered. The standard should be kept up, in examination and in pay, for the public interests as well as for the satisfaction of the profession.

## COMPETITION AT DUNDALK.

### VERY LIMITED INDEED!

ANOTHER attempt has been made to suck the brains of the profession—this time from Dundalk. It appears that in this town, as elsewhere, there are a number of pecksniffs practising who are under-rating and under-selling the properly qualified practitioner. This must continue as long as Architects sit on the fence and make no determined effort to assert their rights. In this case the client who claims our attention belongs to the fair sex (we fain would have said the *fairer* sex), and is the owner of a small public-house. Her circular letter is appended below, and the contract, if let, would run to £1,200.

[COPY.]

94 Park-street, Dundalk.

DEAR SIR—I purpose to have erected two business-houses on site of my own and adjoining house in Park-street and Rampart-lane, for the wine and spirit business, with grocery and provisions if I feel inclined. A neatly-fitted bar, with shop windows in each street, and door on the corner. Rooms and kitchen on ground floor, cellar or basement for storing spirits, first floor drawing, dining, and bedrooms, with bedroom attics.

The second house to be a lock-up shop, with small room at rear on ground floor; a hall entrance to be provided between the shop fronts in Park-street, to lead to rooms on first floor of second house, which can

be used for offices or otherwise. The usual sanitary arrangements for each house. A certain portion of the entire rear to be spaced off for stabling, and stores over same, and the remainder for an open yard, with gate entrance from Rampart-lane. A hall entrance to licensed house adjoining gate entrance in Rampart-lane. The facings of the houses can be done in stock brick, with terracotta fancy facings if required. Two stories, with attics. Queen Elizabethan style suggested.

I have indicated above what are my requirements for the houses, so far as I can see at present. I require a plan and design for the two houses and offices, with specification and bill of quantities, and estimates of the probable cost. I shall pay for the design, plan, specification, and bill of quantities I consider most suitable, £5 5s., and reserve the right to make terms with designer as to carrying out the work under his supervision or direction. The design, plan, and specification I accept to be my sole property. The premises can be inspected and measured at any time during the coming week.

I shall receive designs, plans, specifications, bills of quantities, and estimates until May 10, 1899.

Your obedient servant,

CATHERINE HEARTY.

Comment is almost needless. It is the old tale of ignorance, more than slight, which has dictated such an impossible demand upon our elastic powers. This is shown in the request for the bill of quantities to accompany the plans and specification. We need not remark upon the self-assertive tone of the communication, for that is usual; nor upon the stipulation that the designs and specification are to be retained as the sole property of the client, for we regret to say that is the law. But we may call attention to the magnificent prize of five guineas for £1,200 worth of work, held up so temptingly before our future Deanes, or Drews, or Lynns. Irish folk are poor, but we never dreamt their savings, laid by in the old cracked teapot, were so small as this!

We understand that the qualified practitioners in Dundalk returned the letter with thanks, for the "designs, plans, specifications, bills of quantities, and estimates," were to be sent in before the 10th May, but we now notice in a local paper that tenders are being invited for the work up to the 31st July, in accordance with plans and specifications prepared by an Architect in the town. Is it possible that the kind-hearted architectural worm has once more refused to turn?

## THE ARCHITECTURAL ASSOCIATION OF IRELAND.

By permission of the Architect Mr. G. C. Ashlin, R.I.A., a visit was paid to Portrane Lunatic Asylum on Saturday last. Mr. A. J. McGloughlin conducted the party over the building. A large number of Members availed themselves of this opportunity of visiting the largest modern asylum ever erected in Ireland.

## IRISH ANTIQUITIES.

THE Royal Society of Antiquaries of Ireland went for land excursions on the 28th, 29th, and 30th ult., to enable members from England, Wales, and the South to see some of the beauties of the northern parts of Ireland and the Boyne Valley. On the 28th ult. there was a drive to the Giant's Ring which was continued back to Belfast, thence to Whiteabbey, and round by Carrmonee and Antrim Road to town again. On the occasion of this excursion a presentation of silver plate was made to Mr. R. Cochrane, the hon. sec. of the Society, and Mr. S. F. Milligan, hon. sec. for Ulster. On the 29th ult. the members visited Portrush, Dunluce and the Causeway. On the 30th ult. a party of eighty members visited Drogheda, where they first examined the obelisk which marks the spot where Duke Schomberg fell. They next crossed the River Mattock, a tributary of the Boyne, separating County Louth from Meath, objects of interest being pointed out on the way. Having crossed the river the party entered the subterranean chambers of the Tumulus of Dowth, the ancient burial mound of Irish pagan kings. Further on they reached the great pyramid or Tumulus of New Grange; a mass of stones 80ft. in height and 180,000 tons in weight on a base of two acres. The interior is tunnelled by a passage 80ft. in length, and has a central chamber 20ft. in diameter and 20ft. in height, with three small chambers off it, one ahead and the others to the right and the left. The ground plan forms a cross, of which the entrance passage is the shaft. The stones in the interior are carved with spirals, circles and various other carvings of the most remote times. The age of the tumulus must be about 3,000 years. On the outside there are eleven huge monoliths still in position, and many others which have fallen. These formerly formed a complete circle around the mound. They next drove to Monasterboice, an ancient Irish monastery founded in the middle of the sixth century. The ruins, situated in a graveyard, consist of three great sculptured crosses, a round tower, 110ft. high, and some remains of the ancient church. The round tower is one of the highest, and two of the crosses are the finest in the world. They next drove on to the ruins of Mellifont Abbey, a Cistercian foundation of the year 1142. The party then returned to Drogheda, where they visited various places of interest in the old town, including St. Lawrence's Gate and St. Peter's Church and cemetery, in which are some remarkable tombs. The new Roman Catholic Chapel, a very fine piece of Gothic architecture, which has just been completed, was also visited and its fine altar noticed. The members returned by rail to Belfast, objects of interest being pointed out on the journey, thus concluding the finest and most successful antiquarian outing that has been held in Ireland.

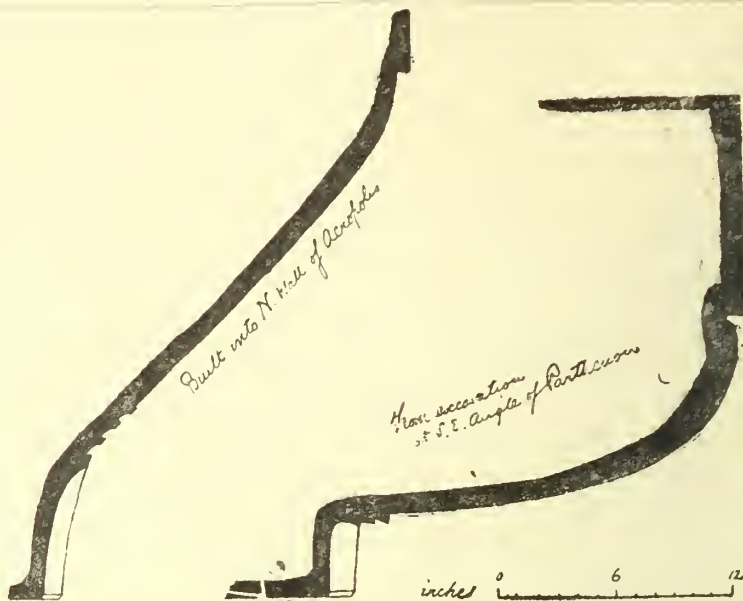
## THE MASTER BUILDERS' ASSOCIATION.

WE have received a very kind welcome from the Association, at the last meeting of the Council, the Hon. Secretary brought the new issue of the paper under notice, and the Council wished us every success and promised us their support.

## CLASSIC DETAILS AND THEIR APPLICATION.

By G. A. T. MIDDLETON.

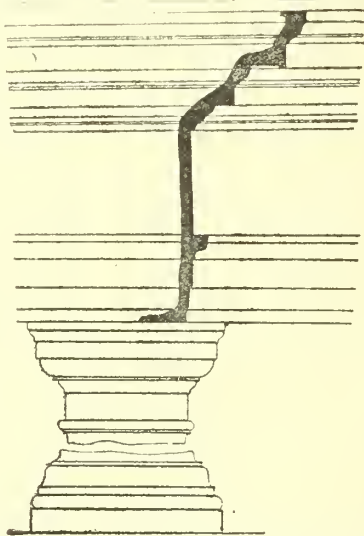
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TWO DORIC CAPITALS AT ATHENS.  
(From "Athenian Architecture," by F. C. PENROSE.)

## I.—CLASSIC TIMES: THE DORIC ORDER.

To him who is engaged in designing upon Classic lines, a full knowledge of Classic details, of their origin and of their development from the earliest times until the present day, is an essential, and this is



DORIC ORDER OF THE COLOSSEUM, ROME.

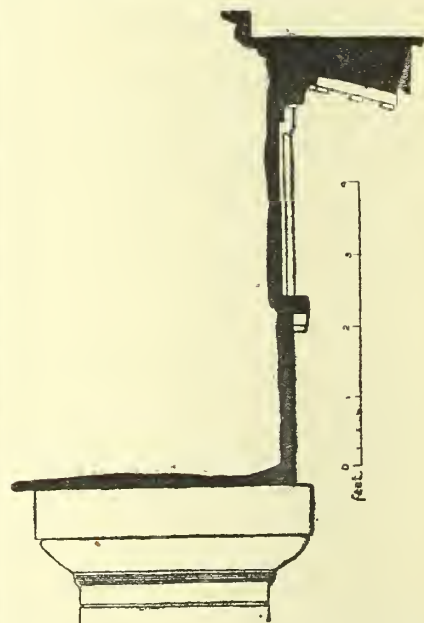
(From TAYLOR and CRESY.)

very difficult to gain. The changes have been so gradual and so slight, more of subtleties of proportion than of bold divergencies of form, that to obtain a full mastery of them, and of the principles involved in them, is necessarily a matter of considerable time and intense application to the student who is just commencing this long course of hard training.

As to the origin of most of the forms employed their is considerable uncertainty, and even about the orders themselves there is much doubt. Most authorities trace the Doric Order back to the rock-cut tombs at Beni-Hassan, in Egypt; but the long interval in date between their excavation, about 2300 B.C., and the erection of the earliest known Doric edifices, renders this extremely doubtful, close as the resemblance is, especially as it is exceedingly difficult to accept the bud-capital of the Theban period in Egypt (1500-1100 B.C.), as an intermediate step. When it appears in Greece and Magna

Græcia, therefore the Doric may be considered as a fully formed architectural order, eminently adapted for the expression of power and solemnity. An architecture of the utmost simplicity, of few parts, and of great repetition, the whole effect depended upon the proportion of part to part, and upon the exact suitability of each detail for the place it had to occupy.

Within these limits the variations were considerable, as dictated by the object and skill of the designer. A glance at the table given in Gwilt will show that the proportion of height of the column to its diameter at base varied from 4.065 at Corinth to 5.899 at Sunium; that of entablature to diameter from 1.140 at the ennea-style temple at Paestum to 2.200 at Selinus (which has columns of only 4.361 diameters



DORIC CAP AND ENTABLATURE:  
SMALL ORDER OF THE PROPYLEUM AT ATHENS.

high); and that of height of capital to diameter from 1.405 at Corinth to 1.570 at Agrigentum; while the intercolumniations varied from 1.023 diameters at Selinus to 1.680 at Aegina, taking only examples erected in truly Grecian times.

In the minor details the varieties are quite as marked. As a rule the columns rested, without bases, upon a stylobate or platform of steps; but at Segesta there is no stylobate, and the lowest drum of the columns is shallow, and is of slightly greater diameter than those above, recalling the similar arrangement both at Luxor and at Medinet Habou, the earliest and latest of the great Theban temples of Egypt. At Segesta, too, the columns were not fluted, and at Solunto the upper two-thirds was fluted only; this in contrast to the almost universal use of twenty shallow flutes with harp arrases between them. The universal tapering of the columns and the almost equally universal employment of entasis are also traceable to Egypt, where the swelling was generally excessive when compared with the finely-drawn and all but imperceptible curve of Grecian work. The entasis, it may be remarked, was absent only where orders were superimposed, as in the Hypæthrum at Pestum, when it would have been an eyesore.

As to the capital and its annulets, the variations in these are extreme. All consist, it is true, of the simple echinus moulding, but there is a vast difference between the hyperbolic and parabolic curves, both of which were used, as will be seen in the two diagrams taken from the Introduction to "Athenian Architecture"; and each of the other Grecian examples is of some slight variation.

The abacus and architrave were almost always plain, though slightly raised circular discs are to be seen upon the latter in the Parthenon at Athens; and in the frieze also there is comparatively little variation, the guttæ being sometimes cylinders and sometimes cones, but always placed in advance of the architrave, with the plane of which the face of the triglyphs agrees, the metopes being in the form of sunk panels enriched with carving. The termination of the channels of the triglyphs with a slight wave, instead of a hard straight line, is worth notice.

The shallow overhanging cornice, with its dentelles and guttæ below, so inclined as to form a drip, and its simple corona on face crowned with the bird-beak moulding, is almost invariable; and here the order ends, for the crowning member, whether ovolo or cyma, properly belongs to the pediment only, returning along the flank only to the width of the stone in which it is worked, and finishing in a lion's head.

The contours of the mouldings are always of extreme refinement, evidencing the greatest possible care, one or other of the conic sections being frequently used; and, though not enriched with carving, save in exceptional instances, it is tolerably certain that colour decoration was used lavishly. It was upon the sculpture, however, that the buildings of the Doric Order in Greece mainly depended for enrichment, and, excellently placed in its simple setting, it was always the best procurable, whether in metopes or in pediments.

As to the magnitude of the change which took place when this order was used by the Romans the accompanying illustration from the Colosseum will show. No longer used constructionally, but as an applied ornament, it had a different function to perform, and, besides this, it was only one of a series of orders placed one above the other, the Doric being now very rarely used alone. These considerations led to the introduction of smaller members and of greater variety—in fact, to an abandonment of the simplicity which had characterised this noble order in its original home. The general proportions, to begin with, were considerably lengthened, and a base was added—usually the "Attic" base, but by no means invariably—that upon the Colosseum,

with roll and cyma, being very suitable to its position. The flutes, too, were more often omitted, and the capital largely altered, a neck moulding being introduced, and the simple echinus being replaced by quadrant and, occasionally, a cyma under it, with fillet between. The abacus, again, is moulded, and the architrave often in three faces, with a cyma moulding separating it from the plain frieze in the Colosseum, or from a frieze of triglyphs and metopes in other examples—only the metopes now are in the same plane with the architrave, and are formed into panels by the application of the triglyphs upon their face. The metope sculptures, where introduced, are quite different to character, the distinct episodes forming a series round the building, carved in high relief and instinct with life, which are found in Grecian work, being replaced by skeleton bulls' heads, with wreaths attached to the horns, and all alike.

As for the cornice, it is changed past recognition, and consists of a comparative multiplicity of members—more, in fact, like a Greek Ionic cornice than one belonging to the Doric Order.

Of all the alterations, however, the most remarkable and best known is that of the contours of the mouldings, which are no longer conic sections but segments of the circle, either simple concave or convex, as in the cavetto and the ovolo; or complex, as in the different varieties of the cyma. Less refinement was consequently possible; yet they remained almost invariably well selected, and admirably suited to their position and purpose.

*To be continued.*

## IRISH LAND COMMISSIONERS.

### TECHNICAL QUALIFICATIONS.

APPOINTMENTS in this Department of an exceedingly valuable character are at present being offered by the Government and the chief qualification for the post is political influence, as a nomination is necessary from the Lord Lieutenant. There is an examination, however, and from the successful candidates men are chosen to fill the posts of Assistant Commissioners at a salary of £800 a year. The appointment is only temporary, lasting for three years. The subjects are:

1. Surveying (including oral examination).
2. Agriculture, f nation.
3. English Composition, including Précis Writing.
4. Arithmetic, including Vulgar and Decimal Fractions.

The first examination was held in May last, when ten candidates qualified out of some two dozen. The test on the whole was rather difficult. The paper on Surveying was more suited to civil engineers than to practical farmers, who, although conversant with chain surveying, know little or nothing of trigonometry, or of instruments like the theodolite or box sextant, which they will never be required to use in their official duties as Land Commissioners. The paper on Agriculture pre-supposed a thorough knowledge of farming. The other papers on English Composition and Arithmetic were fair enough from the standpoint of a Civil Service student, but must have been perplexing to men who know more about the value of land than of the subtleties of syntax or the use of prime factors. The

following is the paper on Surveying set in the May examinations:—

### SURVEYING.

(Candidates may use drawing instruments and logarithm tables.)

1. Describe, with the aid of sketches, the construction and method of use of the box sextant.
2. Name the permanent adjustments of the Theodolite, and state how they are made.
3. Describe the ordinary process of levelling, noting any precautions required to ensure accuracy.
4. An irregular field was surveyed by running a line through it from end to end. From the chain offsets were taken to the right at regular intervals of 50 links to a curved fence, the lengths of the offsets in links being respectively 38 (at the starting point), 48, 69, 60, 40, 80, 85, 50, 30, and 19. What was the area between the chain and the fence?
5. The survey notes of a cloud traverse were as follows:—

No.	Bearing.	Distance (chains).
1.	N. 51° 33' E.	29.18
2.	S. 73° 7' E.	12.30
3.	S. 20° 37' W.	18.32
4.	S. 78° 45' W.	25.40
5.	N. 23° 26' W.	8.21

It is required to determine the area of the figure.

6. A base line is measured 2078.50 feet on an incline of 1° 52'. What is the correct horizontal length of the line? After the line had been measured it was discovered that the steel band used was 200.12 feet long instead of 200 feet exactly. How, and to what extent, will this affect the true length of the base?

7. What are the chief points to which attention should be directed in valuing a farm?

To fill seven more vacancies another examination was held on 11th July and following days, and, profiting by the experience derived from the previous trial, the Civil Service Commissioners set papers more suitable to the candidates who would be most likely to become efficient Commissioners—i.e., land valuers. Out of 24 or 25 candidates, 14 at least were connected with the farming industry, five were civil engineers, including one County Surveyor's assistant, and two were surveyors and valuers from the General Valuation Office. The paper on Surveying is appended below, and it will be seen that a practical chain surveyor would have no difficulty in answering it, the oral questions being also very fair.

### SURVEYING.

(Candidates may use drawing instruments and logarithm tables.)

1. Describe, with the aid of sketches, the construction and method of use of the prismatic compass.
2. Give a general description of a Theodolite, and explain the method of using it in making a triangulation survey.
3. Give sketches of a contour survey of a hill, and describe the operation of making a survey.
4. An irregular field was surveyed by running a line through it from end to end. From the chain offsets were taken to the right at regular intervals of 50 links to a curved fence, the lengths of the offsets measured in links being respectively 30 (at the starting point) 38, 61, 50, 85, 80, 40, 60, 69, 48, and 19. What was the area included between the line and the fence?
5. What is the area of a triangular field, the sides of which measure 2,420, 1,860, and 2,005 links respectively?
6. A line is measured on a uniform slope

of 1 in 17. What allowance per chain must be made for the inclination?

7. What are the methods usually employed for copying, reducing, and enlarging plans?

It is a curious scheme, because although some twenty-five candidates were nominated to qualify, it by no means follows that the best men will be selected. As soon as the results of the examination are known the relative influence of the various successful men will be weighed, and the seven whose sway is the most powerful will be chosen. In fact, it is limited competition backed up by patronage.

#### RIGHTS OF LIGHT AND AIR.\*

A VERY practical work, and one of the first importance, which is being undertaken by the Society of Architects, is that of bringing about some change in the law which (without affecting the rights of property) shall prevent the vast waste of time and money which every year is literally thrown away in negotiating and litigating over questions raised as to rights of light and air.

Every architect and surveyor knows well the annoyance which he and his client often suffer when proposing to erect buildings. It is no exaggeration to say that in some cases a building, the erection of which may greatly improve the surrounding property, is attacked on all sides by questions of light and air, and a crop of ten or a dozen cases may be raised against it, many of them often of the most trivial nature, and it must be an especially lucky building owner who commences and completes his building without any such claim being made.

Almost all of these cases arise from or are encouraged by the uncertainty as to what does or does not constitute the legitimate rights of an adjoining owner, and I am afraid it is only truth to say that the desire of gain largely affects a number of the claims made, and the fear of being stayed by an injunction, and the risk of large costs in fighting an action, induce the building owner to pay sums of money far larger than the damage warrants.

Look for an instant at what has to be faced by a building owner, and it will be seen at once that the risks must often enough curtail building enterprise and seriously impede those who wish to rebuild.

Everyone seems to think that a building owner is fair game for compensation.

It is only natural that each surveyor should desire to look first to his client's interest: and the state of uncertainty as to what are or what are not a client's exact rights, tends to prevent a settlement and produce a lawsuit.

The same thing affects the solicitors when they come on the scene, and consequently not only do the professional costs get piled up by further expert evidence being called in, but the law's uncertainty makes litigation almost inevitable.

In order, therefore, to protect the interests of a client an injunction is obtained, and I fail to see that the architect or solicitors can be blamed if they take this step where the case may be of a trivial character, even if they think their client is likely to obtain a monetary benefit by so doing larger than the real value of the damage.

These cases, too, depend so much on technicalities, while the necessity to bring home to judge and jury the facts as they are, is so great that models and numberless plans have to be prepared, and experts at expensive rates are called in order to prove fully the views of each side to those who have to try and decide the case.

What wonder is it, then, that these cases become enormously expensive, and thousands of pounds are every year more or less wasted in costs? This very expense is the opportunity of the man with small rights to obtain from the building owner a large sum of money, which he will rather pay than try the case with its attendant risks of costs and delays.

I venture to think that no inquiry into this subject could be made without disclosing not only the great number of these actions, but their wasteful cost and the trivial character of the majority.

I am sure that every honourable professional man is desirous of avoiding this useless waste of money and of preventing blackmailing opportunities.

The Council of this Society has set to work to make a determined effort in the direction of preventing this useless waste, which affects not only the public, but the honour of professional men.

There is no doubt the question is a difficult one to deal with when first approached, because it is not desirable that vested interests and the rights of property should be interfered with; but it seems to me that the object which we have in view may be obtained without any such interference, the waste which has been and is a growing evil justly and effectually prevented.

In Scotland the Court of the Dean of Guild deals with these questions, and the canny Scot is saved much annoyance and expense, and, conservative as we may be in England, there can surely be no reason why we should not adopt some similar or suitable means to accomplish the same end here. The Building Act Tribunal, in dealing with Building Act cases in London, has shown that there can be no difficulty in appointing a technical court to deal with these matters, and the payment of its costs would be the merest fraction of those to which building owners are now put.

The secret of this wasteful and improper system lies, like all other wasteful systems, in its uncertainty of the extent and value of the rights affected, and until these can be decided before commencing to build, by an independent decision from a court to which it is compulsory to go as in Scotland, this wasteful and improper system will grow and scandalise our reputation as business-like and honourable men.

The suggestion which I would make, and which I think this meeting should adopt, is that a Technical Court under the London County Council in London, in the corporation in provincial town and cities, should be established, and every building owner should be compelled to deposit a full set of the plans of any new building or material alteration of a building with the authority, paying such fee as may be deemed necessary, and that the authority should then require the owner to give notice to all the adjoining owners who may be affected, and after examining the plans to ascertain if there is interference with any rights of light and air or other easements, then the tribunal should proceed to hear the objectors and the building owner, and after hearing, decide as to what height, &c., the building can be carried without interference with the lights and easements of the objectors.

The fact that such a decision was given before building operations were commenced, and before the building owner was pledged to his contract with his builder, would of itself be a substantial boon, apart from the great saving of time and money, and the absolute prevention of blackmailing by factious and petty cases being raised, and the fighting of expensive actions.

There is no doubt that when cases are carried on men's feelings and men's judgments get involved and warped, and cases are carried in consequence to such lengths that thousands are spent on small and

petty matters which in themselves, taken at the very largest valuation, would not represent more than a tithe of the costs which are incurred.

I in no way wish to pledge myself or the Society of Architects to the details or the exact methods by which this beneficial change should be brought about, but I suggest what seems to me a simple means, that is, an extension of the powers of the Building Act Tribunal in London and of provincial local authorities, by which to accomplish it. The fees charged could be made to cover all the expense of the court and its attendant officers, and would then be moderate enough to prove a mere drop in the ocean compared to the present wasteful process. Further discussion on this subject may devise better means, but anyway it is in my opinion, and I trust it is the opinion of all those to whom I speak, necessary that the settlement of this subject should not be longer delayed, and that the remedy should be applied at an early date.

The Society have presented a petition to the Lord Chancellor, and I have also laid before the London County Council a notice of motion for the Building Act Committee to consider this important question, and I hope for the hearty and substantial support of this meeting.

One difficulty is that the question does not appeal directly to the great body of the public who, though they may suffer in certain ways, only suffer occasionally and for the most part indirectly, but those who build and have built will, I am sure, feel the force and necessity for the remedy which we advocate, and I trust they will use also their best endeavours to bring it about.

I trust too that the efforts of leading men, both architects and surveyors as well as those of the legal profession, will not be wanting in the necessary effort to bring about a reform so greatly needed, and which will once and for all sweep on one side the exaggeration of claims of a petty and improper character, with all the attendant waste of clients' money which comes in its train, and protect more thoroughly from infringement legitimate rights of light, air, and other easements.

Mr. Smith moved and Mr. Haslam seconded:—"That with a view to lessening the costly litigation and delay now attendant upon questions relating to light and air arising out of building operations, it was desirable, in the interests of the public and the architectural profession alike, that all such questions should be submitted to and decided by a technical tribunal in connection with the local municipal authority before the commencement of the work."

The President said this plan had been tried in Scotland, had been in force there, in fact, for very many years, and had proved a great success.

Mr. Hubbard did not see why the local authority should interfere.

Mr. Mitchell Withers moved that the words "In connection with the local municipal authority" be omitted, and this amendment was seconded by Mr. Wigful.

The President, replying to questions, said the local authority would be by far the most convenient body, as the same set of plans which had to be submitted before buildings were commenced would do for the light and air examination. This technical tribunal could not be final, because a party not satisfied with the decision had recourse to the ordinary law; but in Scotland it was very rarely that the ordinary law was resorted to. The expenses in connection with the tribunal were very small indeed, because the gentlemen constituting the tribunal were experts, and therefore expert evidence was not needed, and much cost was saved.

The resolution was carried, only two gentlemen supporting the amendment.

\* An address by T. Walter L. Emden, J.P., L.C.C., President, Society of Architects, at a meeting convened by the Society of Architects at the Cutlers' Hall, Sheffield.

## Current News.

### BUILDING.

#### WYNNE'S HOTEL, DUBLIN.

A THOROUGHLY up-to-date hotel is the old-established Wynne's in Lower Abbey street, now that the extensions, remodelling and re-equipment of the house are completed. Since the hotel passed into the enterprising hands of the Clarence Hotels' Company the large increase in patronage which the establishment has been most deservedly meeting has justified the proprietors in incurring very considerable expense in practically rebuilding the hotel.

On the outside, a striking change has been effected. There is now a handsome front, boasting of large bay windows to the first and second floors.

Entering the spacious hallway, floored with tessellated pavement, a nicely arranged office is seen. Turning to the right a

LUXURIOUSLY APPOINTED SMOKEROOM is reached. Thence access is obtained to the restaurant, which is magnificently fitted, and has been the subject of great attention on the part of the management. The ceiling is of panelled pitch pine, and the walls are dadoed with some choice material, while the upper portions are ornamented with that very expensive covering, anagrypta. The flooring is of polished maple wood. The restaurant is fitted with Spanish mahogany panelling and heavy silver-plated glass. Charming mantel-pieces of marble ornament the apartment, and there are tilings below and walnut overmantels beautifully carved overhead. The chairs are also elegant, being of walnut upholstered in claret-coloured morocco. There is a lift communicating from the kitchen with the restaurant, as well as the coffee-room and commercial-room upstairs.

The bar is of attractive appearance. The counter is of pitch-pine covered with Aberdeen granite, while there are fittings of Spanish mahogany. Opening off the bar is the billiard-room, nicely furnished and supplied with the newest pattern of table by Messrs. Coughlan.

On the first floor are provided a commercial-room, a coffee-room and a writing-room, which are not only most comfortable to the occupants but highly pleasing to the eye. There is a commodious stock-room for commercial men, with the advantage of a luggage lift.

THE LADIES' DRAWINGROOM is furnished with consummate taste, and carpeted with an exquisite pattern of Axminster. The upper floors are devoted to bedroom accommodation, and by the addition of another storey the number of bedrooms has been increased from 20 to 40.

The bedrooms are lofty, daintily furnished, and lacking in no element of comfort. No expense has been spared in regard to the sleeping accommodation, which it would be impossible to improve upon. Each floor has been fitted in costly style with lavatories and bathrooms, and there are very fine corridors.

The rooms are splendidly ventilated by an air shaft serving each landing.

Messrs. Todd, Burns and Co. have supplied most of the furniture and executed the upholstery, while a great deal of the bedroom furniture has been provided by Messrs. O'Dea and Sons, of Usher's quay.

The rebuilding of the hotel has been carried out most satisfactorily by Messrs. H. and J. Martin, from the designs and under the superintendence of Mr. W. H. Beardwood, architect. In addition to gas illumination

#### ELECTRIC LIGHT

is being fitted throughout the premises by Messrs. Dobson and Curtis. The kitchen has been fitted by Messrs. Brooks, Thomas and Co. in first-class style.

The hotel is under the popular management of Mr. H. J. Kilbey, who was well

known in connection with the Victoria Hotel, Cork.

Every precaution is taken in the hotel against the dangers of fire, in the event of which there is easy access to the roof.

## HOUSING OF THE WORKING CLASSES.

### SCHEME FOR NEWBRIDGE.

The proposal of the Newbridge Town Commissioners to build dwellings under the Housing of the Working Classes Act is now pretty well forwarded. For a time much difficulty was experienced in obtaining a site for the erection of suitable habitations, which are so very badly needed in the military town. A site, however, has been obtained, and the Commissioners will now push forward their scheme with all possible speed. That being so, a few facts relating to the site and the plan will prove of interest.

Preliminary drawings have been prepared by Mr. J. J. Inglis, architect, Newbridge, and the Commissioners propose building twenty cottages on the site which is facing the river on the Friary road. The cottages are two-storied, containing four apartments each, to be built on a pretty and desirable site, measuring 440 feet by 130 feet from the footpath—which is to be widened—leaving a garden space in front. It is intended to build the cottages in two blocks of ten each, with space of 40 feet at either end and in the centre. The cottages are very cleverly laid out, and the devising of the scheme reflects great credit on the architect, who has made a special study of this class of building.

Although the superstructure of each cottage measures but 16 feet frontage and 23 feet in depth, and 4 apartments are provided, including a hall and staircase, all the disadvantages of a small cottage—such as dangerous winding stairs and rooms opening into or opposite one another—have disappeared. The fire breasts stand back to back right in the middle of the building, and each apartment has a fireplace. The living room, which is at the rear, and measures 15 feet 3 inches by 10 feet, has the door leading to the yard protected by an open porch. The yards are to be 60 feet in depth, and the necessary out-buildings and ashpits are placed against the end walls; accessible for cleaning purposes from the cartway, 10 feet wide. The rooms—which are thoroughly lighted with casement windows on the ground floor—are 8 feet 6 inches high, and on the upper floor 9 feet 6 inches, with a cove in the ceiling. The front elevation presents an artistic as well as substantial appearance; the roof having a steep pitch and the dormer windows relieving the monotony of the long length. Altogether the scheme seems to be a very happy one, and, indeed, is very creditable to the new body of Commissioners.—*Kildare Observer.*

THE NORTH WILLIAM STREET PUBLIC LIBRARY, DUBLIN.—This handsome building, commenced so recently as February of the present year, has progressed so rapidly that the new premises, which are a decided ornament to the locality, are now completed. It is a mistake, however, to describe them as being situated in North William street, their site being in Dunne street and Charleville Mall, adjoining. The city architect, Mr. Justin McCarthy, prepared the plans, which are being faithfully carried out by the contractors, Messrs. J. Pemberton and Son, of Charlemont street, Mr. Kerr acting in a highly efficient way as Clerk of Works. A large staff of men are engaged on the building, the extent and adaptability of which for its important purposes will be made apparent by a visit to Charleville Mall. The new Municipal Library for the hitherto neglected district of which William street is the centre will prove a valuable

boon to the residents of a wide district on the northern side of the city, including the working classes and others as far as Fairview, Ballybough, the Richmond road, and a widely extended area, the population of which rarely patronised the Municipal Library in Capel street, in consequence of its distance from their homes.—*Irish Times.*

#### TULLOW CONVENT CHAPEL, CO. CARLOW.

—The renovation of this chapel is nearing completion. The nave ceiling has been panelled with mouldings; in each panel are illuminated monograms of various saints. The upper part of the walls are diapered in red, green, and gold. The sanctuary ceiling is clouded and relieved with raised, incised, and surface stars, in shaded gold. The walls are diapered in red, green, gold, and vellum tints. The back of the altar is diapered with a pomegranate pattern interlaced with the insignia of Our Lord and the Virgin in gold. The whole of the lower part of the walls from the string course is panelled with carved woodwork. The panels are decorated in colour. The sanctuary is rich in gold, and treated entirely in transparent colours. On the chancel arch surmounting a halo of glory is the Agnes Dei; on each side are painted angels bearing scrolls, Venite adoremus; on the base are foliage panels, lily, passion flower, rose, and pomegranate in glaze colours, outlined. The floor is covered with inlaid linoleum, the pew floor in cork carpet. The altar carpets are by Messrs. Pim Brothers, Dublin. The work has been arranged and carried out by Messrs. H. G. Bartlett & Co., Brixton.—*Builder.*

RAYMOCHY CHURCH, CO. DONEGAL.—An appeal is being made for a sum of money to put Raymochy Church, Manor Cunningham, County Donegal, in a state of repair. This is a large parish, having few residents of means, and it must needs depend for such outlays as are essential upon outside assistance. It is necessary to restore the ceiling, which is falling and the roof collapsing. It is proposed at the same time to build a chancel and vestry room, and the parishioners, who are doing their best, cannot meet the expense required. A small sum of £350 is all that is needed to make the fabric what is necessary as a seemly place of worship. The Church services have been maintained with difficulty, local generosity proving sufficient so far. But the special work proposed lies as a duty upon the whole Church, and we cannot but expect that a large and scattered parish in such a part of the country now will meet with many friends. The Rev. Canon Kennedy, rector and rural dean, makes the appeal to which we point attention.

#### THE CATHOLIC CHURCH AT TALLOW.—

The chapel at Tallow has recently been entirely renovated, regardless of cost, and it can be truly said that for a town of its size Tallow can boast of as beautiful and artistically finished a House of God as can be found in Ireland. The building is more suggestive of a new chapel than that of an old one, so complete and extensive is the transformation effected. Two large statues have been placed at the entrance to the chapel, behind the large mission cross, which give the yard a complete and imposing aspect.

NEW SCHOOLS AT DROGHEDA.—A splendid building, to be used as parochial schools in St. Mary's Parish, Drogheda, is now almost completed—only needing roof and slating. It will accommodate 500 boys. It is situated on the Old Hill, close to the church, and on ground leased by the Drogheda Corporation. The Rev. E. Curry, P.P., has been mainly instrumental in its erection.

ANNALS OF MONKSTOWN  
AND  
SOME NEIGHBOURING PARISHES  
IN THE COUNTY OF DUBLIN.

BY FRANCIS ELLINGTON BALL, M.R.I.A.  
F.R.S.A.I.

CHAPTER III.—continued.

A.D. 1366 TO 1500.

1368. The Priory of the Holy Trinity leased "Farncoote" and Murphystown to John, son of Richard Cruise, who held also the lands of Kilmacud. *Christ Church Deed*, No. 704. Cruise owned the manors of Merriem, Thornecastle (now Booterstown), and Stillorgan, as well as other lands. He was a Guardian of the Peace for both Dublin and Meath, and was summoned to attend, in 1373, a great Council held in Dublin, in 1380 one held at Baltinglass, and in 1404 he acted as a convenor of "the magnates, proceses, and commonalty" of the County Dublin. In 1376 he was sent as a confidential envoy to England to report on the state of Ireland, and some years later filled the position of a justice in eyre, or judge going circuit. He was severely wounded while taking part in an expedition against the O'Tooles, and died in 1407, having previously received the honour of knighthood. D'Alton's *King James's Irish Army List*, pp. 567, 568; *History of the County Dublin*, pp. 26, 27, 29; *Calendar of Irish Patent and Close Rolls*, vol. i., pt. i., p. 142.

1368. Bother William Topp, Cellarer of Holy Trinity Church, accounted for money received in lieu of the tithes of Tipperstown and Killiney. Mills's *Account Roll of the Priory*, p. 202.

1369. Reginald Talbot was fined in the Court of Exchequer for delivering as the rent of his Dalkey estate a goshawk which was unsound and of no value. D'Alton's *History of the County Dublin*, p. 888.

1370. Matthew, the son of Raymond de Bermingham, was despatched to Carrickmines to oppose the Kavanaghs, O'Byrnes, O'Nolan and other Irish enemies. D'Alton's *History of the County Dublin*, p. 932.

1372. The Priory of the Holy Trinity leased to Sir Thomas Walsh, Chaplain, the lands of Brennanstown, on which he was bound to build and maintain a stone house. *Christ Church Deed*, No. 717.

1374. John Cotton, then Dean of St. Patrick's, afterwards Archbishop of Armagh, proceeded with a considerable force on two occasions to Carrickmines to resist the O'Byrnes, remaining there on the first occasion for eight days and on the second for a month. *Calendar of Irish Patent and Close Rolls*, vol. i., pt. i., p. 87.

1376. The king appointed inspectors to prevent the unlicensed exportation of corn from Dalkey. D'Alton's *History of the Co. Dublin*, p. 388.

1378. Ellena Morton granted the tithes of Leperstown to the guardian and brethren of the Hospital of St. Stephen. See *History of Hospital of St. Stephen*, by Edward Evans, in the IRISH BUILDER for 1896, p. 218.

1379. The Priory of the Holy Trinity leased Tipperstown to Thomas Harrold. *Christ Church Deed*, No. 738.

1385. John Penros landed on September 25 at Dalkey, on his arrival as Chief Justice of Ireland. *Calendar of Irish Patent and Close Rolls*, vol. i., pt. i., p. 124. In 1391 Penros was removed to the English Bench. See Foss's *Biographical Dictionary of the Judges of England*.

1385. Philip de Courtney landed on May 6 at Dalkey, on his arrival as Lord Deputy of Ireland. *Calendar of Irish Patent and Close Rolls*, vol. i., pt. i., p. 128.

1386. Sir John Stanley landed on August 30 at Dalkey, on his arrival as Lord Deputy, and on Sept. 1 came to Dublin. *Ibid*, p. 131, Stanley was an ancestor of

the Earls of Derby, see *Dict. of Nat. Biog.*, under Thomas, first Baron Stanley.

1386. The king directed Sir Richard Talbot, Sir Maurice FitzEustace, John FitzRery, and Michael Darcy to collect a contribution from the owners of land in Fingal, towards the expense of supporting forty light horsemen and as many archers at Carrickmines, to resist the O'Byrnes and O'Tooles. *Calendar of Irish Patent and Close Rolls*, vol. i., pt. i., p. 136.

1390. The King forgave John Cruise, Justice of Ireland, the service of 40s. for which he held his manor of Stillorgan from the Crown. *Ibid*, p. 142. Probably this remission was granted owing to the manor of Stillorgan being "burned and laid waste by adjoining enemies of the mountains," as the manor of Thornecastle had been. See Blacker's *Sketches of Booterstown*, p. 62.

1391. At an assize held at Drogheda, before John de Stanley, Justiciary of Ireland, the Priory of the Holy Trinity recovered land in Tipperstown, which adjoins Leperstown, from Philip, rector of the Church of St. Stephen of Leopards-town. *Christ Church Deed*, No. 388.

1394. Nicholas Pym surrendered to Roger Darcy and Margery his wife, daughter and heiress of John Dawe and Margery his wife, certain lands at Dalkey. *Ibid*, No. 779.

1395. The King directed Janico Dartasse not to meddle with the manor of Carrickmines, which was in the King's hands owing to the minority of John, son and heir of Francis Brune deceased, and the custody of which the King had given to John Darcy. *Calendar of Irish Patent and Close Rolls*, vol. i., Pt. i., p. 154.

1395. King Richard confirmed Dalkey with its church and tithes to the See of Dublin. D'Alton's *History of the Co. Dublin*, p. 888.

1396. The King granted to the bailiffs of the Archbishop of Dublin the right of exercising the office of admiral as water-bailiff in the port of Dalkey. *Ibid*, p. 888.

1400. The King directed John Cotenham to detain ten vessels in the ports from Drogheda to Dalkey. *Calendar of Irish Patent and Close Rolls*, vol. i., pt. i., p. 158.

1400. Simon Hacket was in occupation of Leperstown. *Ibid*, p. 157.

1401. Prince Thomas of Lancaster, second son of Henry IV., then a boy of about twelve years, landed on November 13th, at Bullock on his arrival as Lord Lieutenant, and came that day to Dublin. See notice of him in *Dict. of Nat. Biog.*

1414. Sir John Talbot, Lord Furnival, afterwards created Earl of Shrewsbury, landed on November 10th at Dalkey on his arrival as Lord Lieutenant. See *Ibid*.

1415. The King ordered the manor of Monkstown, which had been seized by the Crown on account of "divers felonies, extortions, and contempts," committed by the Abbot of St. Mary's, to be restored to the Abbey. See Archdall's *Monasticon Hibernicum*, and D'Alton's *Hist. of the Co. Dublin*, page 867.

1421. During his lifetime Sir John Cruise had given a house and some two hundred acres of land at Stillorgan to John Derpatrick and Maria his wife, who was probably Sir John's daughter. John Derpatrick was killed in 1410 when taking part in an expedition against the O'Byrnes. He left two sons, Robert and Stephen. Robert married Catherine, daughter of James Uryell, Chief Baron of the Exchequer, and died before 1421, leaving an only child, a daughter, Alice. His widow married secondly, Bartholomew de Buthe, Lord of the Manor of Drumcondra, to whom in this year the King gave the custody of houses at Stillorgan, which were held "in tail male," and were in the hands of the King owing to the minority of Stephen, the brother and heir, male of Robert Derpatrick. See *Calendar of Irish Patent and Close Rolls*, vol. i., pt. i., p. 218; Whitelaw & Walsh's *History of Dublin*, vol. i., p. 178;

Burke's *Peerage* under de Buthe, Alice Derpatrick married eventually a son of Bartholomew de Buthe by a previous marriage.

1422. The King commanded that the dowry of Catherine, widow of Robert Derpatrick, should be decided in Chancery, and she was assigned a third part of *inter alia*, the great stone house, the bawn, and garden in Stillorgan, held by John Loghenan, a house and land held there by Gylnow, land held there by M'Myllon, a house and land called "The Middle Field," held there by Richard Locumbe, land in "the Colonhousefield," and other lands held there by "the Lord Richard," the wood close to the church of Stillorgan, and the mill which was then working at Stillorgan. *Calendar of Irish Patent and Close Rolls*, vol. i., pt. i., p. 223.

1423. The King granted for the second time to William Tynbegh the custody of the lands of Stillorgan from which Tynbegh had been removed under colour of a resumption by the Earl of Ormonde lately Lord Deputy of Ireland. *Ibid*, p. 227.

1424. The King ordered the escheator to put Stephen Derpatrick, then of full age, in possession of his property at Stillorgan. *Ibid* p. 233. He was subsequently declared an outlaw, and the estate granted to the Cruise family.

1427. James Cornewalshe, Chief Baron of the Exchequer, embarked at Howth on October 22nd for England, and landed on his return at Dalkey on April 16th following. Five years later when again going to England he landed at Holyhead on February 19th, and disembarked on his return at Dalkey, on August 28th. *Ibid*, pp. 243, 252. For an account of Cornewalshe's death, see *Irish Builder* for Aug. 15th, 1897.

1436. The Priory of the Holy Trinity leased Tipperstown to Nicholas, son of Adam Laghtenan of Kill-o'-the-Grange. *Christ Church Deed*, No. 921.

1439. John Talbot, Lord of Feltrim, released a house and two acres of land at Dalkey to Thomas White, *Ibid*, No. 927.

1441. Thomas Grogan, Donald Mole, Richard White, and Donald McShaghlyn, were amongst the inhabitants of Monkstown. *Calendar of Irish Patent and Close Rolls*, vol. i., pt. i., p. 262.

1442. The King directed 10 marks to be paid to Henry Walsh of Carrickmines for expenses incurred by him in resisting the enemies of the King on the "front marches of Dublin." *Ibid*, p. 263.

1450. James Prendergast alias Collyn, was appointed by the Crown bailiff of Dalkey. *Ibid* p. 265.

1451. The King owing to the incapacity to act of Richard and John Barnwall, committed to the custody of Thomas Sale of Saleston gent, and William Walsh clerk two houses and about 100 acres of land at Kilmacud, p. 266.

1470. An Act of this year, having set forth that "herring fishing is always casual and movable by storms and winds from one place to another," authorised fishermen arriving in parts belonging to the Abbey of St. Mary's to draw and cast nets there for herrings at all hours of the day or night. Gilbert's *Chartularies of St. Mary's Abbey*, vol. ii., p. xix.

1471. Sir Thomas Plunkett Knight Chief Justice of the King's Bench died. He had married as his second wife Marian daughter of Sir Christopher Cruise, Knight, through whom his descendants became Lords of Rathmore, and inherited amongst other lands those of Stillorgan. Archdall's *Lodge's Peerage of Ireland*, vol. vi., p. 181. See the *Dublin University Magazine* for Sept., 1854, for a romantic story called *Rathmore and its Traditions*, by M. E. M., founded on Sir Thomas Plunkett's marriage which was reprinted with appendices and notes in the Journal of the Meath Antiquarian Society for 1878-79.

To be continued,

## CELBRIDGE, COUNTY KILDARE.

(Continued from page 86).

HAVING treated of St. Wolstans and its neighbouring villas, of Leixlip Castle and Castletown, the seats of the Conollys, we shall, by way of conclusion, give a brief historical sketch of a villa which acquires a considerable degree of interest from its connection with Dean Swift, and the fair but unfortunate Vanessa.

CELBRIDGE, otherwise Kil-drogheda, or *Cill-droichid*, the church of the bridge, which, according to Dr. Joyce, is a half translation from the original Irish, a name still retained in the name of the parish, but is shortened to "Kildrought," a parish in the barony of Salt, County of Kildare, and contains about 1,844 acres. It is a neat and thriving village, pleasantly situated on the banks of the Liffey, over which river is a handsome stone bridge, erected 1308, by John le Deceur, Mayor of Dublin, a description of which was given in the IRISH BUILDER for 1st of June last.

Celbridge and Castletown originally belonged to the ancient Anglo-Norman family of Dongan, or Dungan, whose name is still retained in various townlands in the counties of Carlow, Dublin, Westmeath, Wexford and Wicklow, and one of whose descendants was in the seventeenth century elevated to the Peerage of Ireland, as

## EARL OF LIMERICK.

JOHN DONGAN, Esq., of Dublin, Second Remembrancer of the Exchequer, *m. Margaret, dau. of Walter Foster, Merchant, Alderman of Dublin*; he died 8th August, 1592 (*bur.* in the Chancel of St. John's Church, Dublin), leaving issue four sons—

I. Walter, his heir.

II. William, Recorder (1614-22), elected on Sir Richard Bolton's surrender; to reside in the City, and the City to have the appointment of Clerk of the Tholsell. He had a lease from the Corporation of the "Island and Furlong of Clontarf." He *m. Slaney-ny-Bryen, dau. of Morrough, 4th Baron of Inchiquin*, by whom he had issue one son, John, and four *dans*. He died, 27th Sept., 1622, and was *bur.* on the 29th of same month, in St. John's, Dublin, "1622, September 29, William Dongan, Recorder of Dublin, husband of Lady Slaney O'Brien, daughter of the fourth Baron Inchiquin, from Fishamble Street." (*St. John's Par. Reg.*; also see Rev. Dr. Hughes' *Church of St. John*).

John Dongan, of Curryhills, County Kildare, only son of the Recorder, *d.s.p.* 26 Feb., 1635-6, and was *bur.* in St. John's, 1st March, following. By his will dated 6th Feb., three weeks before his death, he appointed his cousin, Sir John Dongan, of Castletown, his heir (see below).

III. Edward, of Kiltaghan, County Kildare, will dated 2nd March, 1636-7.

IV. Thomas, of Griffienrath, County Kildare.

The eldest son—

SIR WALTER DONGAN, BART., of Castletown, Kildrought, County of Kildare, created a Baronet 23rd October, 1623, *m. Jane, dau. of Robert Rochfort, Esq., of Kilbride, County of Kildare* (by his wife, Elinor, *dau. of Sir Lucas Dillon, Chief Baron of the Exchequer*) by whom he had issue eight sons and four *dans*.

I. John, his heir.

II. Thomas, a Barrister-at-law; appointed one of the Justices of the King's Bench, 13th May, 1614; and at the Restoration, 3rd Baron of the Exchequer, Dec., 1660; died 1663.

III. Christopher } *d. s. p.*

IV. Mark

V. William.

VI. Oliver.

VII. Luke.

1. Margaret, *m. Thomas Barnwell, Esq., of Robertstown, County Meath.*

2. Mary; 3. Jane; 4. Frances.

Sir William, whose will was pr. 11th February, 1627-8, was succeeded by his eldest son.

SIR JOHN DONGAN, 2nd Bart. of Castletown, and was also heir to his cousin, John Dongan, in his estate of Curryhills, Co. Kildare. He *m. Mary, dau. of Sir William Talbot, Bart., of Cartown* (now Carton, the seat of the Duke of Leinster), County Kildare, and had issue, eight sons, and three *dans*.

I. Sir Walter, 3rd Bart.; one of the Confederate Catholics of Kilkenny; *d.s.p.*

II. Sir William of whom presently.

III. Edward; IV. Robert; V. Michael; VI. Jerome; VII. Sir Thomas who succeeded his brother William, as second Earl of Limerick; VIII. James; the daughters were:—(1) Bridget, *m. Francis Nugent, Esq. of Dardistown, County Westmeath*; (2) Margaret *m. Robert, Lord Trimbeston, and d. 5th Dec., 1678*; (3) Alice *m. Robert Nugent, Esq., Donore, Co. Westmeath.*

Sir John Dongan's Will was pr. 1663. His second son,

SIR WILLIAM DONGAN, Knt., created Viscount Dongan, of Clare, County Kildare, by patent, dated 14th February, 1661, with remainder to his brothers, Robert, Michael and Thomas, and their respective heirs, male; and was elevated to the dignity of EARL OF LIMERICK, by patent, dated 2nd January, 1685, with remainder to his brother Colonel Thomas Dongan, and his heirs, male; and if failing in such, then to John Dongan his cousin-german, and his heirs, male. The Earl married while abroad, a foreign lady, whose Christian name was Euphemia, and by her had issue, one son and two daughters.

Walter, Lord Dongan, M.P., for the borough of Naas, in King James's Parliament, 1685; slain at the battle of the Boyne, 1690.

Maria-Euphemia,

Ursula *m. to Lucas, 6th Viscount Dillon.*

After the defeat of his party at the Boyne, the Earl returned to Limerick, and after the capitulation of that city, he eventually proceeded to France, thereby forfeiting his great estates. The attainder of 1691 included the name of Euphemia Dongan, alias Countess of Limerick; and William Earl of Limerick; and under those attainders the Dongan estates consisting of 26,000, were granted by King William III, to General de Ginkell who, having achieved an important victory at Aughrim, near Athlone, 12th July, 1691, was elevated to the peerage of Ireland by his royal master, 4th March, 1692, as BARON OF AUGHRIM and EARL OF ATHLONE. The grant of the Earl of Limerick's estates, was however, subsequently reversed by Parliament and the Earl of Athlone returned to his native country in the Netherlands, where he died in 1720.

The Earl of Limerick died in 1698, and was succeeded in his titles by his brother.

THOMAS DONGAN, second Earl of Limerick, who served as Colonel of an Irish Regiment in the service of Louis XIV., and subsequently under Charles II. (of France), was Lieutenant-Governor of Tangiers, and Governor of New York. He died 14th December, 1715, and was buried in St. Francis Church yard, London, when the titles became extinct.

But to return to Celbridge.

Amongst the Dutch Merchants who settled in Dublin in the reign of King Charles II., was BARTHOLOMEW VON HOMRIGH who became a wealthy merchant here, and married, about the year 1685, the daughter of Mr. Commissioner Stone of Dublin. At the time of the Revolution he warmly espoused the cause of William, Prince of Orange, afterwards King William III. After the Battle of the Boyne, King William gave him the lucrative appointments of Commissioner of Stores, Commissioner of Revenue, and Master

Master-General, in which offices he realized a large amount of money. In 1693, Mr. Van Homrigh was admitted a member of the Dublin Philosophical Society; became an Alderman of the City of Dublin, and in 1697, was elected Lord Mayor of the city, on which occasion King William granted the sum of £770 "for s.s. Collier, to be presented to Bartholomew Van Homrigh, Esq., Lord Mayor, with his *Majesty's* effigies on a Medal; To be made in England by the most able workmen, and skilfull artist in things of the kind." This chain which had been presented by King William, to replace the original chain which was presented by King Charles II., in 1665, to Sir Daniel Bellingham, Lord Mayor of Dublin, in 1665—the first who bore that title—and was lost during the Revolution, has been worn by every successive Lord Mayor to the present time.

About two years before his Mayoralty, Mr. Van Homrigh built for himself a country residence, near the village of Celbridge, on a plot of ground containing about 14 acres, situated in the parish of Donaghcumper, and named it CELBRIDGE ABBEY. Here Mr. Van Homrigh died in 1703, and in the year 1707, his widow and her four children (two sons and two daughters) went to live in London; when about 1710, Rev. Jonathan Swift (the future Dean of St. Patrick's), was introduced to them by Sir Andrew Fountaine, Usher of the Black Rod, who is so often mentioned in *Swift's Journal to Stella*. When he was introduced to the family, he took under his tuition, one of the fatherless girls, "Vanessa"—an anagram for "Essy Van," the pet name of "Esther Van Homrigh"—Dean Swift's lover and victim. Swift lodged in the same street, in London, Bury Street, as the Van Homrigh's, and he used to mention quite artlessly to "Stella," (Esther Johnston), whose tutor he was, just 15 years before, that he and Fountaine dined there, and that when he removed to Chelsea, they kept a closet for him where he used to dress in his gown and periwig. He never told Stella a word about the tuition, lest, perhaps, it might have been too suggestive of reminiscences. He mentions it in this kind of way:—"1711, Mrs. Van sent me word her eldest daughter was taken suddenly ill, and desired I would come and see her. I went, and found it was a silly trick; however, I rattled off the daughter. . . . This was Mrs. Van's daughter's birth-day, and we spent the evening there, drinking punch—that was our way of beginning Lent. . . . Dined with the Vans to-day, and my cold made me loiter all the evening." The Van Homrighs, knowing nothing of Stella, looked on Swift as a middle-aged bachelor clergyman. He moved in the highest circles of society, and his acquaintance was an advantage, and ought to have been a protection to the widowed family in a strange place. There is no evidence to show how far the mother encouraged, or whether she knew of, the love affair between the tutor and pupil; but we can scarcely doubt that the sister must have been in the secret, when she accompanied Vanessa to Dublin after their mother's death.

About the year 1712, both of Mrs. Van Homrigh's sons died, and in 1714, the mother died also, in London, leaving £10,000 between the two daughters, "Vanessa," and "Mobkins," the pet name for Mary. After their mother's death, the sisters came to Dublin, in 1717, when Mary shortly after died, leaving Vanessa sole heiress. Her arrival in Dublin was a great perplexity to Swift, and after a short time he persuaded her to fix her residence at Celbridge Abbey, where he occasionally visited her.

(To be continued.)

## Legal Items.

### THE OMAGH ROMAN CATHOLIC CHURCH.

Mr. Justice Kenny, sitting in the Record Court, was occupied on Thursday and Friday in hearing an action arising out of the building of the new Roman Catholic Church in Omagh. The plaintiff was Joseph Colhoun, builder and contractor, Strand Road, and the defendants the Right Rev. Monsignor McNamee and nine others, constituting the building committee. The plaintiff claimed £3,330 5s. 5d. for work done, services rendered, and materials provided, and also £1,030 9s. 9d. as damages for breach of contract, and in the alternative claimed a like amount for being wrongfully prevented from completing the contract. According to plaintiff, the original amount of the contract was £18,514 1s. 1d., of which he had been paid £15,300 on account. He claimed the balance, with interest from November last, in addition to the damages for breach of contract, as well as £54 11s. 8d. for the plant on the ground.

The defendants traversed the various statements in the plaintiff's claim; averred that the amount of the contract was only £17,000; and the plaintiff was now only entitled to £2,366 10s. 2d. lodged in court. They also alleged that this £17,000 covered all the work ordered in writing by the architect, the late Mr. William Hague, Dublin.

Evidence was heard at so great length that the judge had not concluded his summing up until about eight o'clock. His Lordship submitted ten questions to the jury, and they found that £801 10s. 11d. and £47 9s. 11d. was due to the plaintiff over and above the sum lodged in court. According, however, to their answer to another question, extra works had been done without authority in writing from the architect, and upon this

Mr. Drummond applied for a direction on the ground that the defendant was bound by the final certificate issued by the architect.

His Lordship acceded to the application, directing a verdict for the defendants.

Mr. Walter G. Doolin, M.A., architect, was examined on behalf of the defendant.

### QUEEN'S BENCH DIVISION. (Before Mr. Justice Boyd.)

FEARON V. FARRELL.

ROAD CONTRACT, Co. DOWN.—This was an application by John A. Fearon, Merchant, Rostrevor, to be appointed receiver over a sum of £16 due to the defendant, Thomas Farrell, Kilbroney, by the County Council of Down, on foot of a road contract entered into with the old Grand Jury.

Mr. Cusack (instructed by Messrs. Sheridan and Russell) appeared for the plaintiff, who had recovered judgment against defendant in June last for £387s. 3d., debt and costs; but the sheriff had made a return of "no goods" to the *fi. fa.* issued on foot of the judgment. The defendant was road contractor for the repair of the Newtown Road, from Rostrevor to Bryansford, with the Grand Jury at the Summer Assizes, 1898. The contract was now enforceable against the County Council, and the County Surveyor had certified so as to enable defendant to receive payment of a sum of £16 11s. 8d. on foot of his contract.

His Lordship ordered plaintiff to be appointed receiver over the sum payable to defendant by the County Council, in part satisfaction of his judgment.

BELFAST.—In the Belfast Police Court, Messrs. Jones, Brothers, Packing Case Makers, Ormeau Avenue, were summoned for having employed for a period of twenty-seven days four young persons under 16 years, without having a certificate of fitness. The defendants were fined 10/- and costs in each case—in all £2 and costs.

### HOUSE SANITATION—LANDLORD'S LIABILITY.

At the City Sessions, Dublin, the landlord of a house in O'Connell Street brought an action against his tenant to recover £36 expended in making sanitary improvements which had been ordered by the sanitary authorities. The claim of the landlord was based on a covenant in the lease that the tenant should keep the premises in repair. After hearing the evidence, the Recorder suggested that the case should be settled, and that each party should pay £18.

In connection with the case the Recorder said, that according to the Sanitary Acts, as they at present stood, the owner, as defined in the Acts, was liable for the costs of all sanitary work executed on the premises. The landlord or lessor was owner under the definition. This law was unjust, because the tenant might have a vastly greater interest in the sanitary improvements than the landlord from whom he held under lease. Some years ago he (the Recorder) brought the matter under the notice of Mr. Sexton, when that gentleman was in Parliament. Mr. Sexton promised to endeavour to get a short Act passed, giving power to a tribunal to apportion expenses of this kind between the landlord and the occupier. Mr. Sexton subsequently told him that he had mentioned the matter to one of the heads of a Government Department, who said that although the change appeared a small one, it was likely to be contested, and that great trouble might result from any interference with the definition contained in the existing Act. Mr. Sexton was consequently unable to do anything with the matter at the time. He (the Recorder) thought, however, that the necessity of such an amendment in the law was urgent, and that the matter ought to be dealt with by Parliament.

### EMPLOYERS' LIABILITY.

WORKMAN OBTAINS DAMAGES.

At the City Sessions, Dublin, Bernard Monaghan, labourer, brought an action against Mr. Peter Byrne for £20 damages for personal injuries sustained, as he alleged, through negligence on the part of the defendant's workmen.

It appeared that the defendant was building a house on the Howth road, near Clontarf, and the plaintiff was employed in the work. He alleged that a number of bricks were placed on a "wall plate" on the top of one of the walls for the purpose of keeping it down. The foreman of works and a carpenter were engaged in measuring operations with a lath, and in doing so struck one of the bricks, which fell on the head of the plaintiff, who was below, causing him to sustain a severe wound on the scalp. He was under medical treatment for four weeks, and was incapacitated from working for six weeks. He sought compensation under the section of the Employers' Liability Act, 1880, which awards it for personal injury sustained by workmen by reason of defect in the condition of the ways, works, machinery and plant connected with or used in the business of the employer.

Mr. Thornhill (instructed by Messrs. Hunter and Burland) submitted on behalf of the plaintiff, that the case was within the Act.

Mr. F. J. Smith (instructed by Mr. Good), for the defendant, denied that the Act was applicable to the case.

The Recorder had no doubt that transitory building operators came under the Act, and that it was not restricted to permanent works. But what he had great doubts about was that the arrangement of placing bricks on a "wall plate" was a defect in the works.

Michael Lindsay, examined for the plaintiff, deposed that the putting of bricks on a "wall plate" to temporarily secure it

was not a good way of doing so, and was not a usual course.

Evidence was given by another witness that the practice was most dangerous, and another said that the brick in question was resting on about two inches breadth of surface before it fell.

Plaintiff deposed that he received £1 0s. 3d. a week.

The Recorder said that he was not going to hold that because it was a usual thing to do dangerous things to save expense that these things were not defects under the Act. He held that the wall in question was part of the works used in the business of the defendant, that the brick fell not while being used in the process of building, but having been placed there with others to keep the "wall plate" firm. That constituted a defect in the works, and he gave a decree for the plaintiff for seven guineas.

An application made by Mr. Smith for a stay of execution was granted.

## Correspondence.

### ROYAL COLLEGE OF SCIENCE, DUBLIN.

TO THE EDITOR IRISH BUILDER.

SIR,—Having read an article, under the above heading, in the issue of your inestimable journal of the 15th June, in which the following paragraph appears:—

"The Committee appointed by the Lord President of the Council, in 1897, to enquire into the buildings and site of the Royal College of Science for Ireland, have reported that in their opinion, the existing College is too small, and is inconveniently situated (the house stands on the east side of St. Stephen's Green, and was built by Lord Chancellor Saurin)."

The article seems to have been copied from the *Builder*, which I must assume to be the London *Builder*. If that be so, surely the editor of the London *Builder*, or whoever is responsible for the glaring error to which I am about calling your attention, should know by consulting *Smith's Law Officers of Ireland*, London, 1839, a book, I opine, of no small authority, or even *Thom's Dublin Directories*, they would find that no such Lord Chancellor ever existed in Ireland. The Right Hon. William Saurin, K.G., one of the Benchers of King's Inns, and Attorney-General for Ireland (1807-1822), who lived in No. 32 St. Stephen's Green, North (died 11th February, 1838), was, I believe, an aspirant for that high office, but eminent lawyer as he was, he was not made Lord Chancellor. On the resignation of the Right Hon. George Ponsonby, Lord Chancellor of Ireland, 25th March, 1805, the Right Hon. Thomas Manners-Sutton (younger son of John, 3rd Duke of Rutland), a Barrister-at-law, one of the Barons of the Court of Exchequer in England, was appointed Lord Chancellor of Ireland, 1st May 1806; upon which occasion he was elevated to the peerage, 20th April, 1807, as BARON MANNERS of Foston, County of Lincoln. His Lordship resigned the Lord Chancellorship 5th November, 1827, and was succeeded by Sir Anthony Hart, who was succeeded 23rd September, 1830, by Lord Plunket.

The house No. 51 St. Stephen's Green was built about the middle of the last century, by Lord Castlecoote. In 1800 it was let, furnished, to the Earl of Cardigan, and in 1807 the house and premises passed into the hands of Lord Chancellor Manners. The mansion was a detached building, having on each side handsome pedimented wooden folding gates leading backwards to coach-houses and stables. The garden to the rear under the windows, extended backwards a long way; blackbirds and thrushes built their nests there, and it is said, that it formed one of Lord Manners' enjoyments to feed these birds. After his

Lordship resigned the Chancellorship, the house was occupied by J. H. Bowen, Esq., from 1829 till 1832; and from 1832 till 1847 by J. H. Bowen, Esq. In 1848, the "Lord Chancellor's House" (as it was then best known by that name), was purchased by the Lords of the Treasury, by whom it was converted into a "Museum of Irish Industry," under the direction of the Right Hon. the Chief Commissioner of Woods and Forests. Two new wings were added to the central building, on the sites of the old gates, which gave a very imposing appearance to the old mansion house, and in 1851, was opened to the public—its first director being the late Sir Robert Kane. The Bowens let the eastern end of the garden for building ground, and is now known as Ely Place, Upper, formerly "Smith's Buildings." (See *History of Old Dublin Mansion Houses*, in *IRISH BUILDER*, vols. 35, 36 and 37).—Yours, &c., EDWARD EVANS.

[We are of course aware that the Right Hon. Wm. Saurin never attained the position of Lord Chancellor; but the reference thereto in the advance sheet, for which we were indebted to the courtesy of our Contemporary, *The Builder*, escaped notice. It may be of interest to remark that descendants of the same family occupied a house in Stephen's Green up to within a few years ago.—ED.]

TO THE EDITOR IRISH BUILDER.

"DEAR SIR,—"Young Architect," in this week's issue of your JOURNAL, asks what you consider the best and simplest form of architect's account books, and where these can be got, and in your editorial note you mention a paper read before the Architectural Association by one of the members dealing with this subject.

Now, I have the system embodied in this paper at my finger tips, and certainly nothing could be simpler or more calculated to put an architect's practice on a proper footing. I am of the opinion held by prominent members of the profession that there is not half enough attention given to this important subject by most architects, and that an effective method of book-keeping would go a long way in ensuring them the success they hope for. If your correspondent wishes to take any further steps in the matter I shall be pleased to hear from him on the subject. Yours, etc., "ARCHITECT'S BOOK-KEEPER."

THE REGISTRATION OF ARCHITECTS.

TO THE EDITOR OF THE IRISH BUILDER.

DEAR SIR,—I have read with interest your able editorial on the above, though I am unable to agree with you on some points.

It is quite true that the passing of the Bill at this or any other juncture would confer a legal status or diploma on every practitioner under certain conditions, yet it must be remembered that Parliament will not, and very rightly, consider any measure which interferes with vested rights and interests, at the same time delay will not improve matters, while effluxion of time would remedy the evil you suggest as likely to follow the passing of the measure.

The framers and supporters of the Bill have not entered upon their task without counting the cost, nor are they to be daunted by obstacles and opposition, and it is helpful to remember that it was the younger members of the already closed professions who were instrumental in securing this privilege to themselves in the face of many difficulties, placed in their way by institutions and individuals, and history will undoubtedly repeat itself in the case of the architectural profession, for it is not to be expected that the younger men at any rate who feel more than others the necessity of protection, and who have no self interest to serve at the expense of the community in general, will much longer be content with the present state of things.

It is of course easy to read between the lines of the report of the Presidential remarks on this subject at the recent banquet of the R.I.B.A. to which you refer, but the only result of such inconsequent after dinner statements is to "give away" the Institute and strengthen the hands of the supporters of registration.

The time for indifference and opposition is past, let the Institute shew that in this, as in other matters, their real desire is to move with the age; better take the lead now than be compelled to follow in the near future. Yours faithfully, "HIDRAM."

## Electric Notes.

Como.—The Volta Exhibition, at Como, has been completely destroyed by a fire attributed to the fusing of some electric wires.

ST. PAUL'S CATHEDRAL.—The offer of Mr. Pierpont Morgan, a wealthy American, to light the interior of St. Paul's Cathedral with electricity has been accepted, and the experiments in lighting the building which have been made have proved most satisfactory. Arrangements are in progress for an installation estimated to cost £5,000.

LONDONDERRY.—The Lighting Committee of the Londonderry Corporation have approved of the report of Mr. R. V. Macrory, their resident Electrical Engineer, on the private lighting scheme, and have made application to the Local Government Board to sanction a loan of £20,000 for the work. They also recommended that Mr. John Christie, of the Glasgow Corporation Electric Lighting Works, be appointed Consulting Engineer; and, further, that tenders be advertised for in the three local newspapers, and in four electrical journals. The same amount of light as now given by electricity at £3,000 or £4,000 a year, steadily reducing and the property belonging to the municipality, could not be obtained from gas for £20,000 a year. The new scheme that is reckoned to produce £2,922 was made out at 5d. per unit.

BANGOR (Co DOWN).—The Drake and Gorham Electric Power and Traction Company, Limited, has notified the District Council of its intention to apply for powers to supply Bangor with electricity.

RANDALSTOWN.—The Antrim County Council has referred to the District Council a letter received from Messrs. Webb, of Randalstown, asking for permission to light the town electrically.

RATHMINES, DUBLIN.—The Electric Lighting Committee have received tenders for arc lighting equipment (108 series parallel lamps, posts and switch-gear, &c.), steam and other pipes, jet condenser and cooling apparatus, and other plant for the electricity works. Mr. Robt. Hammond, M.I.C.E., 64 Victoria St., Westminster, S.W., is Consulting Engineer to the Council.

DUBLIN.—Wynne's Hotel, Lr. Abbey Street, has been splendidly fitted throughout with electric light, by the well-known firm of Messrs. Dobson and Curtis, Ltd., 13 Stephen's Green, Dublin. Architects and builders should send for one of their catalogues and price lists of switches, cut-outs, lamp holders, switch and distributing boards, &c., different forms of which are illustrated and described.

PORTRANE, DUBLIN.—Hr. Herbert Mayne has been appointed Electrical Clerk of Works at Portrane, at a salary of three guineas per week.

WESTINGHOUSE ELECTRIC COMPANY.—The rumour that Lord Kelvin is to resign his chair at Glasgow University may perhaps have some connection with the fact that he is to become the Technical Adviser to the great enterprise which the Westinghouse Electric Company of America are about to establish in this country. Lord Kelvin is an Irishman, having been born in Belfast in 1824. There are to be works at Manchester practically duplicating the

Pittsburg works, and 5,000 men will find employment there. So at last Great Britain will have an electrical engineering establishment laid out on thoroughly modern lines and we shall be able to buy our electrical machinery without going abroad for it. Mr. George Westinghouse, the multi-millionaire inventor, whose name is known throughout the world in connection with the air-brake and the gas-engine—will be directly associated with the new undertaking. He has secured more than 100 acres of land at Trafford Park, Manchester, forty acres of which will be devoted to the manufacture of electrical apparatus alone. The Westinghouse Company built the famous electric installation at Niagara, and they are the owners of the Tesla patents.

"ELECTRICAL TRANSMISSION IN WORKSHOPS" (Supplement to *Engineer*, pp. 9-14, November 25th, 1890).—The Broad-leath Works of the Linotype Company, near Manchester, are described:—Details are given of the generating and distributing plant, with curves showing the steady nature of the load. The machine tools, most of which are small, are grouped and belted to lengths of shafting driven by either 5 or 10 h.p. motors. Amongst other details of tests, it is stated that a 2½-in. shaft, 93-ft. long in ten bearings, required 0.42 h.p. at 200 revolutions per minute, or 0.042 h.p. per bearing: a similar shaft 130-ft. long absorbed 0.052 h.p. per bearing. The power output is about 75 kilowatts; the commercial efficiency of the generating plant is 80 per cent., and the running costs amount to 0.94d. per B.T.U. Lighting and power are supplied from the same plant without inconvenience. A.H.A.

POWER DISTRIBUTION, TRACTION, AND LIGHTING.—"Electrical Equipment of Refrigerating Plant" (*Amer. Elect.*, 40, pp. 1-5, 1899).—The lighting, ventilating, elevating power and partial pumping service for the Manhattan Refrigerating Co.'s New York storage and distributing plant is entirely electrical. Within the building, the refrigerating medium is brine circulated by steam pumps; but for the central station service to the adjacent market stalls liquid ammonia is used. The ammonia pumps are steam-driven, but the brine and water pumps are worked in pairs by 20 h.p. belted motors at 250 volts, which have to operate in the wet. Switches and contacts are silver-plated to prevent chemical action with the ammonia or salt-laden atmosphere. Walls and ceilings being frequently snow-covered, special precautions had to be taken with conductors, which are twin-rubber and lead-covered, laid in steel pipe with outlet boxes filled solid with paraffin. Lamp-holders are of the porcelain waterproof type, hung by twisted cable from the outlet boxes. To get over difficulty with shocks from damp switches, a novel form of enclosed switch is used, consisting simply of a glass tube stoppered at both ends and containing a globule of mercury. When tilted in one direction the mercury joins the iron terminals, which pass through one of the stoppers. Forty 12-in. motor-fans are used for maintaining an even temperature throughout the storage rooms. A specially designed hanging waterproof bell has to be used with the telephones on account of the prevalent moisture.

E.H.C.H.

## Our London Letter.

For the first time in this century at any rate, the Bishopsgate frontage of the famous old city palace, "Crosby Hall," is exposed to view, thanks to the "house-breaker" whose demolitions in the vicinity have been proceeding apace; unfortunately, however, the space cleared will soon be covered by new buildings, and the beautiful fifteenth century banquetting room once more hidden from sight. Crosby Hall is crowded with historical associations; founded by Sir John Crosby, it afterwards became the residence of Richard, Duke of Gloucester, and subsequently of Sir Thomas More and Sir John Spencer, a rice merchant, and ancestor of the present Marquis of Northampton. During the civil wars, it was used as a place of confinement for prisoners, while part of it has been occupied as warehouses, and numerous tenants have assisted in its mutilation. In 1831, it was "restored," and was afterwards used as a scientific and literary institution, finally passing into the hands of its present owner, Col. Sir H. Davies, M.P., formerly Lord Mayor. It has now, for many year past, and is still, used as a restaurant, so that the inside at any rate is familiar to many a one who until lately has been acquainted with a very small portion of the exterior.

There are many instances of waste product being turned to good account, and although parish refuse does not sound a very promising material, yet in the case of Mile End the vestry have "raised the wind" by a very practical "breeze," through the initiative of their surveyor, who has found a good market in the brickmaking industry for the ashes, breeze, and clinkers resulting from the sifting of the aforesaid refuse, the amount realised during the last three years averaging nearly £3,000 per annum, though lately the supply of cinders has somewhat fallen off. But the surveyor has by no means yet exhausted his resources, for, by utilising the heat generated in the refuse furnaces (and which is now entirely lost) for electric lighting—a scheme which he hopes to initiate on similar lines to those prevailing at Llandudno—he may well expect to earn the gratitude of the vestry, and deserve the title of "The Golden Dustman."

Art has never received much encouragement from the Treasury Department, who have lately refused to increase the grant of £750 per annum to the National Gallery for the purchase of paintings of persons whose names have attained historical celebrity. The Trustees have thus been prevented from purchasing three pictures from the Mulgrave Castle collection which have just been offered to them at the price of three thousand guineas. One of these is a painting of the Queen by Wilkie. The view held by the Treasury is that, in acquiring examples, regard must be had to the celebrity of the person represented rather than to the merits of the artist, though what personage is more likely to be celebrated in Imperial history than Her Gracious Majesty it would be difficult to determine. But, possibly, in this case at any rate, the Treasury may see their way to reconsider a decision which, to say the least of it, appears unpatriotic.

The chief topics in town at present are heat and holidays, how to avoid the one and compass the other; and as regards the former, it is certainly a sign that a record is near at hand when Aldgate pump is surrounded for the greater part of the day by a crowd, among whom that hall-mark of respectability, the silk hat, is to be found in considerable quantities.

The suggestion that the R.L.B.A. should be installed in Burlington House on the removal of its present occupants, the London University, to more convenient quarters at South Kensington, is one

worthy of some consideration, and following close as it does upon the recent question of acquiring more suitable accommodation for the representative architectural body, the matter may possibly be taken up by the Council, and little difficulty ought to be experienced in the way of raising any necessary funds without an appeal to the Government, who are not likely in any case to entertain a proposal of this kind.

The retirement of Lord Kelvin from the Chair of Philosophy at the University of Glasgow may not altogether be considered a matter of regret, as he will now have more leisure to devote to further researches in the many branches of science with which his name is identified. He came into prominence in connection with the first Atlantic cable and has ever since maintained his position as one of the first scientists and inventors of the age. His connection with the Scotch University dates from his twenty-second year, and is thus voluntarily severed after fifty-three years continuous service. It will be difficult, indeed, to estimate the value of his life work.

Permanent exhibitions of building materials and appliances have received much more encouragement abroad than at home, and one has recently been established at Christiania, the machinery department of which is to be opened this month; electric power is supplied and opportunities given to manufacturers to show their specialities at work. The British manufacturer, already a sufferer from foreign competition, will view the growth of these permanent exhibitions with mingled feelings. They are, no doubt, exceedingly useful in bringing the producer and consumer together in a manner which it would otherwise be almost impossible to do. People will not trouble to go all over the country in search of new ideas, but when all the latest improvements in any industry can be seen and tested in one place it is obvious of what great value these exhibitions are.

It is twelve years ago since the Institute of Naval Architects met at Newcastle, and in the meanwhile many notable improvements have taken place both in the size and construction of ships, and the shipbuilding industry on the Tyne increased, while the Shipwrights' Company have established a special fund, which now amounts to nearly £4,000, for providing classes in London and the leading shipbuilding centres, for the encouragement of the study of naval architecture, with very encouraging results.

Talking of naval matters suggests coast defences, and sea walls are usually associated with the protection of harbours, but the one now in course of construction at Barrow is to serve to keep the sea from the workings of hematite mines, the ore of which is of the finest quality. The embankment will enclose about 170 acres, under which the mines will be extended, and will cost about half a million sterling, and, it is expected will be the means of adding much to the wealth of the company owning the Hodbarrow mines.

**POLICE BARRACKS AT BELFAST.**—A memorial has been sent to the Lord Lieutenant to direct the establishment of two police barracks in suitable positions on the County Down and County Antrim sides of the river, on the Harbour Commissioners' property, for the better securing of the lives and persons of workmen employed on the several works from injury and molestation.

**CLOUGHJORDAN CATHOLIC CHURCH.**—This new church, in the diocese of Killaloe, has recently been opened. The foundation stone was laid by the Bishop, the Most Rev. Dr. McRedmond, just thirteen months ago.

## Engineering.

### IRISH CHANNEL TUNNEL. MR. BALFOUR FACING THE RISKS OF FAILURE.

PRETTY nearly all the pros and cons of the Irish Channel Tunnel were discussed by Mr. Balfour in his reply to the important deputation that waited upon him at the Foreign Office.

Lord Londonderry explained that they wanted no money, but merely the Government approval, coupled with the guarantee of 3 per cent. on the outlay, which would probably be £10,000,000, with £2,000,000 added for interest. With such a guarantee the money could be raised without difficulty.

Mr. Barton, C.E., then unfolded his plans and charts, and showed how easy and simple it was to effect a new Union of Great Britain and Ireland. Mr. Barton favoured the route from Island Magee, County Antrim, to a point near Portobello, in Wigtownshire. The total length of the tunnel would be thirty-five miles, twenty-five of which would be subaqueous. One of nature's paradoxes was revealed to Mr. Barton when he assured Mr. Balfour that a tunnel under the sea was always drier than one under the land.

Mr. Balfour was affable but critical in his reply. He beamed encouragement upon the members of the deputation for their high patriotic motives and Imperial enterprise, but froze the genial current of their souls by speculations on sudden subterranean springs, lack of traffic, and possible bankruptcy. Did the deputation suggest that the Government should guarantee 3 per cent. on the actual cost of making the tunnel, or only upon a fixed sum, say £12,000,000? He could see the advantages of the tunnel very clearly—personally, he would gladly go 100 hundred miles under sea in order to avoid crossing it—and he could promise on behalf of his colleagues, careful consideration to their proposal—a proposal of great international importance.

**LIMERICK DRAINAGE SCHEME.**  
At the last meeting of the Limerick County Council, a report was read from the County Surveyor, Mr. J. Horan, relative to a scheme for improved arterial drainage and reclamation of waste lands in Limerick. The matter was brought before the council some time ago, and was referred to Mr. Horan for his report, which was, on the whole, favourable to the project. The expenditure on river regulation and kindred works, Mr. Horan estimated at £120,000, and on reclamation, £100,000. This outlay might be expected to be reproductive. The basis of the scheme would be compulsory purchase of lands affected, and it would be necessary that statutory powers should be given to the County Council in such matters. It was assumed that every county in Ireland would co-operate in the scheme. After some discussion, a resolution was unanimously adopted stating that the County Council were of opinion, that the matter should be dealt with by the Legislature, that power should be conferred on County Councils generally to initiate such works, and that copies of the resolution be sent to the Chief Secretary and others interested.

### ATHLONE GASWORKS.

IN view of the inadequacy of the Athlone Gasworks to meet the demands made on them for the lighting of the town, the Athlone Urban Council has decided on borrowing from the Board of works the necessary money (£4,500), for improving them. It is interesting to note that the price of gas in Athlone is already cheaper than in most other provincial towns in Ireland.

# THE IRISH BUILDER.

VOL. XLI.—No. 950.

DUBLIN, AUGUST 15, 1899.

## THE IRISH TUNNEL.

WE doubt very much whether the Irish Tunnel will ever be made. There are many people enthusiastic on the subject, and we should be sorry to damp their ardour, but they do not appear to have taken the scheme seriously. The experience gained from Mont Cenis and St. Gothard shows that within certain limits distance does not greatly matter. A tunnel some thirty miles long should present no difficulty calculated to intimidate the engineer, and, given suitable conditions, it is just as easy to bore beneath the sea as through a mountain. But there are imposing obstacles. No one knows what faults exist in the Channel, and no accurate information can be obtained about the geological strata. It is proposed that the railway shall pass 150 ft. below the sea bottom, which indicates a steep gradient on either side, and it has to circumvent the deep channel depression known as Beaufort's Dyke.

Then the break of gauge seems to be forgotten. The Scotch gauge is like the English narrow gauge, 4ft. 8½in., but the Irish gauge is 5ft. 3in. This difference might be got over by the proposed extra set of metals along the Belfast and Northern Counties Railway. We certainly think the project would cost nearer twenty millions than twelve, and take nearer twenty years than ten to complete it. However, it has sentiment in its favour, and we hope it may some day be an accomplished fact.

## LOUTH COUNTY COUNCIL.

### COUNTY SURVEYOR'S REPORT.

Mr. Lynam read his report as follows: County Surveyor's Report to the County Council at the first Quarterly Meeting. July 20th, 1899.

MR. CHAIRMAN AND GENTLEMEN, Proposals have been formulated by the Rural District Councils for the renewal—for six months only—of all road maintenance contracts which expire on September 30th next. It is intended that next Spring these contracts are to be renewed for the usual term of five years, dating from April 1st next—the beginning of the financial year.

In each Rural District the expenditure on roads for this year is within the limit fixed by the certificate of the Local Government Board under Section 27, sub-section 2 of the Act

At the adjourned quarterly meetings of the Rural District Councils, competi-

tion for contracts was unusually keen. In some cases where the particulars of the lowest tender were called out the contractor refused to take the contract, or did not appear. In most of such cases the councils refused to consider any tender, and contracts were not made; but contracts for these works may now be made by the County Council if tenders are received. Under the Grand Jury law Road Sessions were bound to accept the lowest tender for any public work, provided that the sureties were good. And under that law a system grew up under which two or more tenders in different names were in effect made by the same contractor. The law is now altered. When a contractor signs his name to a tender, which he repudiates next day, there is reason to suppose that the tender was made with an unfair and fraudulent purpose, and in such cases the councils may act at their discretion under Section 18 of the Procedure of Councils Orders.

The repair of sudden damages to public works under the authority of magistrates' orders is now illegal, and it is of urgent importance that the County Council should substitute some other mode of procedure under Section II. of the Act. Ordinary repairs to bridges, &c., are carefully attended to, but once or twice in nearly every year a sudden damage occurs which could not be foreseen.

When fixing the salaries of the County Surveyor's assistants, I beg that you will bear in mind that each assistant must pay at least £12 per annum out of his pocket for car hire in the winter season, besides keeping a bicycle for summer work, and the better an assistant does his work the greater are his expenses out of pocket.

Twenty years ago, when bicycles were not used, an assistant's car hire amounted to about £30 per annum, for an assistant was not expected to pay £30 for car hire out of a salary of £80 or less. In fact, car hire was then paid by the county and by contractors who required advances. There were always in different parts of a county a number of roads in charge of the County Surveyor, and on each of these roads car hire was charged for a whole day's work, provided that the road, or part of it, was inspected on that day. I put a stop to this practice, but assistants are still paid their car hire by the road contractors in October in each year when the supply of broken stones for the year is being measured up. October is always a good month for cycling, but assistants are obliged to employ cars to carry a measuring box, and also to save time in carrying contractors and their men along the roads from one heap of stones to another. Each contractor pays his share of the day's car hire, generally 1s. 6d. to 3s., but these sums, when added up, amount to about £7 for each of three assistants, or £21 for the three Rural Districts. The assistants forward to me, at the end of each week in October, a return showing the car hire received from each contractor during the week. This system is open to objection. I beg to suggest that, in addition to his salary, whatever it may be, each assistant ought to be paid a travelling allowance—either his actual expenses as verified by vouchers, or at a rate per mile, to be fixed by you, say 1d. per mile for car hire during the five months October

to February, and 1d. per mile for cycling during the remaining seven months of the year, assistants not to take car hire from contractors, or drive in contractor's cars, on pain of dismissal.—I am, gentlemen, your obedient servant,

P. J. LYNAM,  
County Surveyor.

## ANNALS OF MONKSTOWN AND SOME NEIGHBOURING PARISHES IN THE COUNTY OF DUBLIN.

By FRANCIS ELLINGTON BALL, M.R.I.A.  
F.R.S.A.I.

### CHAPTER III.—continued.

A.D. 1482 to 1488.

1482. John Walsh, late of Stillorgan and his sureties Edmund Harrold, of Killmashogue, Nicholas Walsh, of Dundrum, Theobald Walsh of Booterstown (who were his brothers), John Lawless, of Shankill, and Maurice Walsh of Shanganagh, were released from bonds into which they had entered with the Priory of the Holy Trinity. *Christ Church Deeds*, Nos. 332, 333, 1035, 1041.

1482. Dalkey could at this time raise 200 men at arms, seven fairs were annually held there by grant from Edward IV, as well as weekly markets, and the bailiff had power to levy on merchandise such customs as were levied by the Mayor and bailiffs of Dublin. D'Alton's *History of the Co. Dublin*, p. 889. It appears from the *Liber Niger* (Bishop Reeves's copy in T.C.D. Library, pp. 241, 554), that a fair formerly held at Powerscourt was removed to Dalkey.

1488. Sir Richard Edgecombe, after he had received the homage of those who had espoused the cause of the pretender Lambert Simnel "departed out of Dublin to a place called Dalcay, six miles from Dublin, where his ships lay; and the Archbishop of Dublin, Justice Bermingham, and the Recorder of Dublin with many other nobles brought him thither and that night he took his ship, and lay at road all night." Gaskin's *Irish Varieties*, p. 29.

1488. By an Act of Parliament of this date, the boards of the Pale were defined so that Dalkey, Monkstown, Booterstown, Kill of the Grange, and Bullock should be within it. D'Alton's *History of the Co. Dublin*, p. 34.

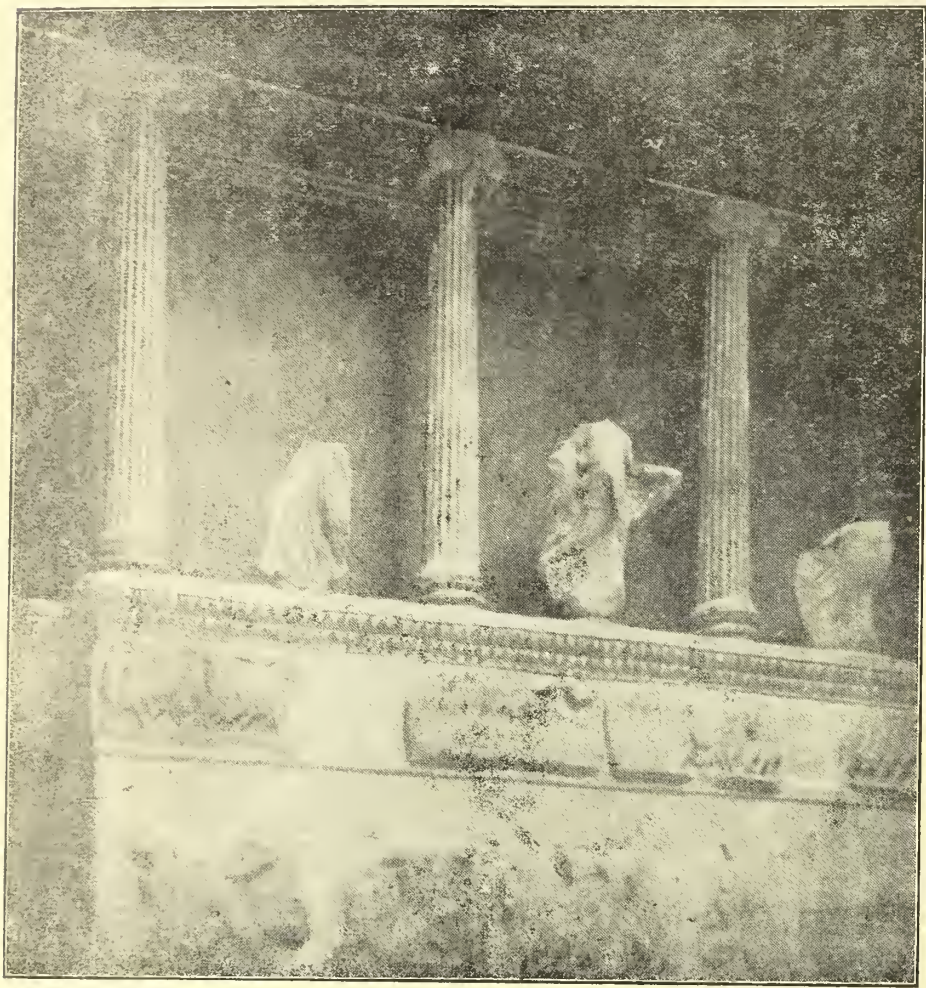
(To be continued.)

GREYSTONES PRESBYTERIAN CHURCH.—For years past, owing to the rapid growth of Greystones as a fashionable seaside resort, the church accommodation did not meet the requirements of those who wished to attend. After consultation with some well-known Dublin Presbyterians who take a deep interest in the growth of our Church in and around Dublin it was decided by the addition of two ransets, together with small school and session-room, to make the Church suitable to the requirements of the rapidly increasing congregation. The church has now been reopened with an addition of 120 sittings. The building is of rubble stone-work, roughcast outside, and late Gothic in style. The architects were Messrs. Young and Mackenzie, of Belfast.

CHURCHTOWN PRESBYTERIAN CHURCH.—New National Schools and Teacher's Residence have been built at Churchtown (Tamlaght O'Crilly). It was very difficult to get the site, and this is the first case in Ireland which has been won under the compulsory power of the Education Act of 1892.

CLASSIC DETAILS AND THEIR APPLICATION.  
By G. A. T. MIDDLETON, A.R.I.B.A., M.S.A.

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THE NEREID MONUMENT, FROM XANTHOS, LYCIA.  
(Now in the British Museum.)

II.—CLASSIC TIMES: THE IONIC ORDER.

THE origin of the Ionic Order is even more deeply involved in mystery than is that of the Doric, for there is no Proto-Ionic example known which compares in the least with the Proto-Doric of Beni-Hassan. A few small indications point to its introduction from Assyria and Persia rather than from Egypt, and the use of a base, together with the form of the flutes, as if gouged out with a gouge, suggests its being the translation into stone of forms originally devised for timber. Again, therefore, we must accept it upon its first appearance in Grecian work as a complete and fully developed order, varying in its different examples as did the Doric, but having in all cases an entirely different part to play. When used alone it was employed in all instances save one upon buildings of smaller size than was the Doric—upon the lighter edifices where grace and elegance were to be aimed at, rather than majesty and the over-awing of the multitude. The one exception is the Temple of Diana at Ephesus, where queenly rather than kingly dignity was achieved; and this, too, was built at a somewhat later date than were the greater Doric works.

Under these circumstances an increased employment of enrichments was to be expected, and such we find; but the parts were still so few that it was upon their correlation that the effect principally depended, and enrichments had to be introduced with the utmost skill and care, else the whole would have been spoilt.

Similarly the proportions became more delicate. The following table, taken from Goussier, gives those of the now destroyed

temple on the Illyssus, and of the two Ionic porticoes of the Erechtheum.

	Diameters High.	Height of Entablature to Diam.	Inter-Columnation.	Height of Capital in Terms of Diam.	Upper Diam. in Terms of Lower Diam.
Illyssus.....	8.241	2.265	2.090	.610	.850
Minerva Polias.....	9.119	2.287	3.500	.700	.833
Erechtheus.....	9.337	—	2.000	.773	.816

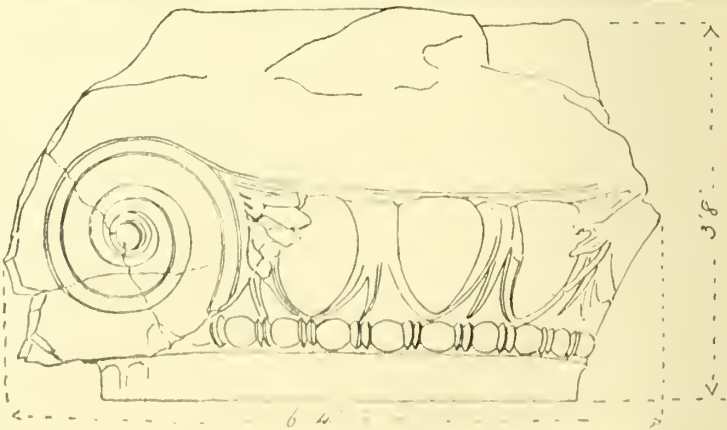
With these we may compare the proportions of the Temple of Diana at Ephesus, the columns of which were 8.5 diameters

high, while the taper was so great that the upper diameter was only .786 of the lower—and this in spite of the columns being of no extreme slenderness. It will thus be seen, that when greater dignity was called for, greater strength was shown in the proportions, the great size of the columns, again, carrying off a degree of taper which would have appeared clumsy in a small building.

With regard to the several parts of the order, a considerable amount of freedom was evinced. The bases alone varied from the simple roll at the foot of the sculptured columns at Ephesus to the elaborately-moulded base, in two stones, of the unsculptured columns in the same building; but the upper member is almost invariably a roll, either plain, or fluted horizontally. The columns, also, though generally fluted with 20 tolerably deep flutes separated by fillets, were, in rare instances, as at Ephesus, enriched with bands of sculpture, or even, as in the Caryatid Portico of the Erechtheum, replaced by sculptured figures. In this way it will be observed that sculpture was used in this order, not merely as an adjunct to, but as an integral part of, the architecture.

Though the voluted capital is considered to be typical of the order, it not only occurs in many forms, but is not even invariable, as it will be observed that the caratidæ already mentioned are crowned in a much more simple manner; and there are large square capitals in the British Museum from the Temple of Athené Polias at Priene, which are carved with winged griffins of Assyrian type, and in which the volutes are quite minor features. The general type, however, is that illustrated, from Ephesus, and from the Mausoleum at Halicarnassus, though the scale is generally smaller; and occasionally there are two, and even three, rolls to the volute, as in the famous example of the Erechtheum, which also has a band of the anthemion ornament round the top of the shaft. As an example of how far the refinement of mouldings was carried, it may be noticed that the fillet to the volute roll at Ephesus is not flat, but slightly convex, though it becomes flat, and is more coarsely worked when it is converted into a band above the eggs, and consequently would be hidden from sight.

The entablature, like the other portions of the Ionic Order, was treated with considerable freedom by the Greeks, the proportions especially being liable to alteration, though the general arrangements of an architrave in three facets, then a sculptured frieze, and then the cornice over, was almost invariable. The example illustrated herewith, from the Mausoleum at Halicarnassus, may well be compared with others. The moulded band separating architrave from frieze is here formed of the egg and tongue; while at Eleusis it is a plain moulding of cyma reversa below and cavetto above it, and upon



FRAGMENT OF AN IONIC CAPITAL FROM THE TEMPLE OF DIANA AT EPHESUS.  
(Now in the British Museum.)



FRAGMENT OF THE LOWEST DRUM OF A COLUMN FROM THE  
 TEMPLE OF DIANA AT EPHEBUS.  
 (Now in the British Museum.)

the Erectheium there is the leaf-and-dart enrichment, with bead and fillet below and a moulding over. Then the frieze, though sculptured generally, is sometimes plain, and the cornice varies greatly. The large dentils at Halicarnassus, with egg and tongue under and cyma reversa above, are of smaller proportion at Eleusis, with cyma above and below, and this is almost the same in the Caryatid Portico at the Erechtheium, save that there the cymas are enriched with leaf and tongue; while the

used as a crowning member, and worked as a gutter behind, with outlets for the water provided through lions' heads at frequent intervals; but the small moulding between corona and cyma is open to variation, and the cyma itself is sometimes plain, but more often enriched with the anthemion.

The Ionic Order seems to have been a good deal more used by the Romans than was the Doric, and though generally as an applied ornamental order, it sometimes appears as a constructional order also. Thus it is found treated in different ways,



IONIC BASE FROM ELEUSIS.

and differently again when, as an applied order, it was used in superimposition to the Doric, and so had to be proportioned to harmonise with the order below, and to have its mouldings, and even its base, contrived for observation entirely from beneath. Still, generally speaking, both its proportions and details compare tolerably closely with those adopted by the Greeks, and Gwilt's table of proportions may again be quoted, as follows :—

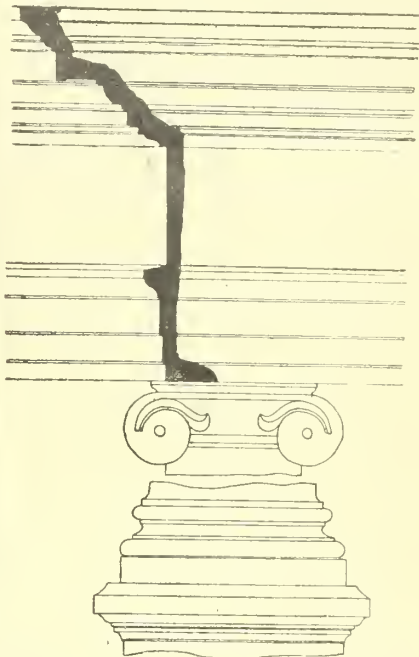
	Diameters High.	Height of Entablature to Diam.	Inter-columniation.	Height of Capital in terms of Diam.	Upper Diam. in Terms of Lower Diam.
Fortuna Virilis.....	8.796	2.182	2.125	.457	.874
Theatre of Marcellus...	9.000	2.391	—	.557	.842
Colosseum.....	8.842	2.280	—	.466	.833

The greatest variation from Grecian practice will be observed to lie in the height of the capital. Of course, there are the usual changes in the contours of the mouldings, but in other respects most of the other details coincide with tolerable exactitude with the Grecian; but the capital is flat both in actuality and in appearance, the waved line across the top being made stiff and straight, and the light elegance of the order is thus much interfered with.

When employed as a constructional order, it cannot be said that the arrange-

ment of the angle capital is happily managed either by the Greeks or Romans, and certainly no satisfactory expedient has yet been discovered for overcoming this fault, where the order is returned.

In the Temple of Fortuna Virilis the facets of the architrave are separated from one another by mouldings; and the



IONIC CAPITAL & ENTABLATURE.  
 (From the Colosseum at Rome.)

frieze is carved in festoons instead of being sculptured. This, however, may be looked for, figure sculpture being much less used upon Roman than upon Grecian buildings, and being replaced by the work of the stone-carver in a repeating pattern of natural leaves and flowers.

PORTADOWN PARISH CHURCH.—The organ of the parish church of Portadown has recently been enlarged at a cost of upwards of £100, mainly through the generosity of contributors, who made it a condition of their giving that their names should not appear in connection with the matter. The organist, Mr. H. B. Bruce, B.A., is to be congratulated on the successful completion of the work, which has been carried out under his directions in a most satisfactory manner by Messrs. Telford & Telford. The following is a list of the new work done: Great organ, open diapason (8ft.); ditto, principal (4ft.); swell organ, oboe (8ft.) In addition, the front chancel pipes that belonged to the double open diapason on the great, were renewed; also, the composition pedals have been made to work quietly. These changes have effected a vast improvement, and the gratitude of the parishioners is due to those who contributed so willingly towards the improvement of the musical part of Divine worship.

CATHOLIC CHURCH AT WHITEHEAD.—At Whitehead, in the parish of Carrickfergus, a new church was formally opened. It is over 200 years ago since a chapel existed in the district. The new church stands on an eminence, commanding an uninterrupted view of Belfast Lough, and, surrounded by the wild mountain scenery of Antrim, no more picturesque place could be chosen for the building. The site was secured by Most Rev. Dr. Henry, who is having a residence for himself near by. The cost for completing the new church will be about £500. The church will accommodate about two hundred people, and will be finished in a few weeks.



CARYATID FROM THE S.W. PORTICO  
 OF THE ERECHTHEIUM.  
 (Now in the British Museum.)

entils are absent from the rest of the Erechtheium, a single leaf-and-tongue enriched cyma alone remaining as bed-mould to the cornice.

In the cornice itself, the corona seems to be invariable, and also the cyma recta

## CLONTARF DRAINAGE.

At the Duke of Northumberland's Select Committee of the House of Lords on 20th July, met for the consideration of the Dublin Boundaries Bill, the following expert evidence was given:—

Mr. Baldwin Latham, C.E., examined by Mr. Coulthorpe Munroe, said the scheme of 1873 was far preferable to the present main drainage scheme of the Corporation. A thoroughly effective drainage system could be provided for Clontarf at an outlay of not more than £23,000, and it was unfair, therefore, to ask the township to come in and pay a far larger amount as their portion of the main scheme. He had made a very careful examination of the district, and based his estimate entirely upon his own observations. He was never guided by other people's figures, and had seen no other estimate of this work until after he had made his own calculations, and presented his estimate of what the local scheme would cost. It was altogether wrong to say that he had been called into the case for the purpose of cutting down another engineer's figures. He did not think the main drainage scheme was a good one.

Mr. Fitzgerald observed that the scheme had been sanctioned by Parliament, and witness had no right now to discuss its details.

Mr. Latham said the scheme had never been before Parliament. It had only been approved by the Local Government Board.

The Chairman said if the proposal of the promoters was that the sewage of the townships should be included in the Dublin scheme then the adequacy of the scheme could be very properly discussed.

Mr. Latham, continuing, said the provision made for the rain outfall in the Dublin Main Drainage Scheme was altogether inadequate for the city itself, without including the surrounding districts. In case of a storm he apprehended a very serious overflow of both rainwater and sewage into the River Liffey. He had heard a great deal during the sitting of the committee about the condition of the Clontarf foreshore, but the nuisance was attributable to deposits from the city outfalls rather than to Clontarf sewage.

By Mr. Fitzgerald—He was called in by the township about March last for his opinion as a scientific witness.

You know Mr. Chatterton who designed the main drainage scheme; don't you think him a gentleman of considerable experience in these matters? I don't think much of his experience if he is responsible for the scheme.

Then you must have pretty much the same opinion about the engineering advisers of the Local Government Board? I know nothing about them.

Have you ever heard of Sir Benjamin Baker? Yes.

Do you know that he has approved of the scheme? Well, I would not think much of his approval (laughter).

Continuing, witness said he knew Mr. Mansergh, but did not recognise him as the highest living authority on the treatment of sewage. He was an authority on that matter, and might or might not have given his support to the scheme. He could only repeat that, in his opinion, the Dublin main drainage scheme was inadequate for the purposes for which it was intended.

Mr. Kaye-Parry, an engineer of Dublin, examined by Mr. Ronan, Q.C., said the Howth district was absolutely without any drainage or water supply, and it was not fair to Clontarf to put it with that township for the purposes of calculating the death rate. He had prepared a scheme of drainage for Clontarf at an estimated cost of £31,000. He fully agreed with the statement of Mr. Griffith that any substantial cause of nuisance on the shore of Clontarf arose from the sewage of Dublin deposited there,

and not from that of Clontarf. He thought the present system of drainage in Clontarf was satisfactory, and he certainly should not advise the Township to spend any large sum on drainage until Dublin sets its own house in order. If the Corporation scheme of main drainage should turn out to be a success, and it was found that they could undertake the Clontarf drainage more cheaply and satisfactorily than Clontarf could do the work itself, he should advise the Commissioners to join the Main Drainage Scheme. But he estimated that it would cost about £100 less by having an independent outfall than for the sewage to go into the City sewer. On the matter of Artisans' Dwellings, there were 378 acres of building ground now unoccupied in the City, and 40 houses could be built on each acre, with full sanitary accommodation, each house might be occupied by one separate family. Allowing in this way, 200 persons to the acre, the 378 acres would give accommodation for 75,000 working people, amounting to one third the present population of Dublin. The City need not, therefore, contend that annexation was necessary in order to enable them to obtain space for the accommodation of the working classes.

Cross-examined by Mr. Bushe, Q.C.—If the unoccupied space in the City he had referred to was utilised, many of those now living in crowded tenement houses in Dublin could be moved out into those separate houses if erected, and the pressure of overcrowding thus be greatly relieved.

Mr. W. G. Perrott, Town Clerk of Clontarf, and Civil Engineer, examined by Mr. Monroe, said the population of the Township had been increasing rapidly lately, and that a scheme for the construction of workmen's dwellings was then before the Local Council. Comparing the population of Clontarf with that of Dublin, while that of the City was 67'38 to the acre, the population of Clontarf was only 3'94, and this was to be attributed to its being a rural place and sea-side resort. Witness then went to show that annexation to Dublin would be disadvantageous to the Township financially, and said the death-rate of Clontarf with unsanitary Howth included, was lower than the average rate of Dublin.

Cross-examined by Mr. Fitzgerald, Q.C.—At present the amount of debt per head of the population in Clontarf was £1 17s. 9d., but if the Bill passed the debt would be raised to £7 3s. per head. If the drainage scheme on Mr. Parry's estimate was adopted it would raise the debt to £8 12s. per head.

This closed the case on behalf of Clontarf.—*Irish Times*.

HOUSES FOR POLICEMEN.—Among the suggestions made so far with respect to the question of providing suitable dwellings for the married members of the D.M.P., perhaps the best is that the police themselves should form a co-operative building society on similar lines to those on which other societies of the kind are run. By mentioning the project it will soon be ascertained whether the idea commends itself to a sufficient number of policemen. If the matter were taken in hands by three or four energetic men it could be brought to a successful issue. Apart from the question of providing suitable houses by this means, it is urged that it would furnish an opportunity for a good investment for those who might have a little money saved, and who might be disposed to add thereto. —*Contabulary Gazette*.

HOUSE OF REST, BANGOR. Two new buildings have just been added to the House of Rest, Bangor, county Down. They are of a picturesque character, and simple and commodious. The cost was £5,000, but £2,000 are still required to complete them.

## Current News.

A TOWN HALL FOR MACROOM.—For some time past the Macroom Town Commissioners have been in communication with Lady Ardilaun and her legal advisers with the object of securing a site for a Town Hall. It is admitted on all hands that such a building is an urgent necessity, having regard to the growing importance of the town, and the Commissioners deserve great credit for the interest they have taken in the matter, and the practical steps they have already taken to secure a suitable site. Seven or eight years ago, the late Lord Bantry granted the upper portion of the Market house, under lease to the late Ven. Archdeacon Cullinan, P.P., for the purposes of a Town Hall, at a nominal rent. Excellent plans were then prepared by an eminent Cork architect, but no move was made to commence operations, for the reason that no funds were available. Immediately on coming into office, the Town Commissioners were confronted with the necessity of having a Town Hall. They set to work, and at the outset were advised that the lease to Ven. Archdeacon Cullinan would not suit their purpose, and thereupon they approached Lady Ardilaun, Lord Bantry's successor in title, who generously expressed her intention of giving a lease on the same terms as her predecessor suitable to the requirements of the Town Commissioners. Mr. A. W. Barnard, C.E., has been at work for some time preparing plans, &c., of the new hall, and it is expected that building operations will commence in a short time. The people of Macroom are lucky in acquiring such a valuable property at comparatively small cost.

NOTES FROM PARIS.—One hundred and nine artists have taken part in the competition opened by the Government for designs for the diplomas for the awards in the 1900 Exhibition. The designs, on view in the Galerie des Machines, are all of a very mediocre character and recall the exhibition of designs for postage-stamps, held about two years ago, which resulted in nothing. It is useful to remember this, for at the 1889 Exhibition the diploma was designed by Galland.—An interesting exhibition of pictures, drawings, and sketches by Puvis de Chavannes has been opened in the Galerie Durand Ruel. This exhibition, which closes on July 13, will be followed by a public sale.—The municipal administration are now restoring the façade of the Chapelle de la Sorbonne, which contains the tomb of Cardinal Richelieu.—A block of very large houses is now being built on the site of the old reservoirs, at the angle of the Rue de Constantinople and the Boulevard des Batignolles. These houses are being built from designs by M. Charles Lefebvre, architect, and they present a fine façade of sixty mètres in length, the monotony of which is broken by the bow windows thrown out, with columns and cupolas over.—M. Falguière is to execute four decorative figures to ornament the pedestal for the monument for Victor Hugo, the principal figure being the work of M. Baryes. The four figures symbolise Tragedy, Comedy, Lyrical Poetry, and Satire.—*Builder*.

RE-OPENING OF CARBURY CHURCH.—A very interesting ceremony took place upon the re-opening of the church at Carbury, county Kildare, after undergoing extensive repairs. Through the unceasing efforts of the worthy Vicar, the Rev. Canon Henry Johnson, the necessary funds—about £600—were subscribed, the work being completed last week. His Grace the Lord Archbishop of Dublin specially attended and preached a very impressive sermon from Matthew 28:20, which was listened to with marked attention by a large congregation.

## STANLEY'S SURVEYING AND DRAWING INSTRUMENTS.

THAT Stanley and Surveying Instruments are synonymous terms it is scarcely necessary to remind our readers, but how many of them have any conception of the vast amount of labour and skill, not to say science, that are requisite to produce these indispensable of the engineer, architect, or draughtsman. Under the heading of "A Magnificent Spectacle" in the issue of *Commerce* for July 12th, a most interesting account is given of the manufacture of these instruments, with a brief sketch of the career of Mr. Stanley himself. His ancestor was Sir Thomas Stanley, and his own father was an eminent mechanical engineer, whose patents, particularly for refined heavy weighing machinery, are still worked on

employed in extensive premises at Norwood. There are also two establishments at Great Turnstile and London Bridge.

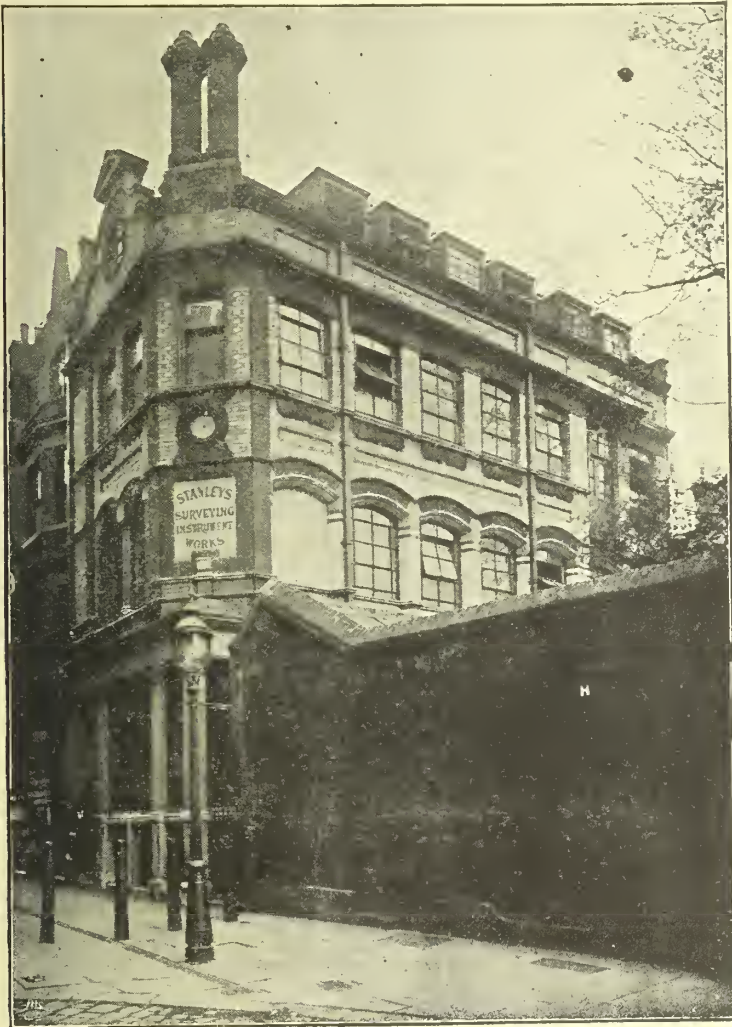
All the seasoning of timber is done at his works, for it is necessary that the materials used should be above suspicion. The timber is laid in open sheds, and every six months it is turned over and changed in position. This goes on regularly for a period of from five to ten years, according to the kind of wood, and the purpose for which it is intended.

In the factories there are innumerable modern appliances, such as planing machines, milling machines, lathes, forges, etc., the casting process being the most important branch. The "dividing" of mathematical instruments is a science in itself, and the working of the divisions on an ordinary draughtsman's scale is per-

years ago a certain tunnel was made for an English railway, and when the two workings approached each other it was found that there was so nothing like 20 ft. difference in the alignment. It turned out to be the fault of the theodolite.

It is gratifying to know that Americans are obliged to come to Mr. Stanley for a large share of their instruments, notwithstanding a high import duty.

Space does not permit of further extracts from this valuable article, which contains numerous illustrations showing the various processes of manufacture, and a portrait of the scientist. Mr. W. F. Stanley, F.R.A.S., F.G.S., is the author of two important technical books on Surveying and on Drawing Instruments, as well as a deeply scientific one on Experimental Researches into the Properties and Motions of Fluids.



GREAT TURNSTILE WORKS.

the best machines of the kind that are made.

Mr. Stanley commenced business in 1854, and in 1856 he invented the simple open form of stereoscope, of which 100 dozens were ordered at once by a large London firm. Upon the decline of the stereoscope trade he turned his attention to drawing instruments, which were then made inartistic in form and of unscientific construction. His first patent for these was taken out in 1860, one most important item of which was a cross-bolt to hold a needle firmly to form the point. He also invented the taper form of T square, the isogon, lettering set-squares, etc. Surveying instruments were next a speciality, in the manufacture of which about 150 skilled workmen are now

formed by the dividing machine automatically, one stroke at a time, the machine being left to itself to work the inches, half-inches, eighths, etc. Mr. Stanley has invented instruments, and made them with his own hands, one machine working habitually to the millionth of an inch! Every detail has been the subject of profound study, and every appliance is designed to ensure, above everything, accuracy.

Concerning theodolites, one often hears of the way in which a tunnel, excavated at both ends, is so exactly measured that the two gangs of workmen meet in the centre with the walls of the tunnel perhaps only an inch or two out of the straight line. This means that the theodolite used was a good one. Some

## CELBRIDGE, COUNTY KILDARE.

(Continued from page 95.)

Esther Van Homrigh ("Vanessa") died at Celbridge Abbey, in May, 1723, and was buried in the old churchyard of Donaghcumper. Her will is dated 1st May, 1723, and proved 6th June following. Dr. Geo. Berkeley, afterwards Bishop of Cloyne (1733-1753), and Robert Marshall, of Clonmell, afterwards Judge in Common Pleas (1757-1766), were her executors, and to whom she bequeathed all her property, some £9,000, except small legacies to her servants and friends, amounting to about £500.

As we are merely giving a brief historical sketch of the seat of the Van Homrighs, we consider it foreign to our subject to enter upon the domestic affairs of Vanessa, or her correspondence with Swift during her time at Celbridge, as most of our readers are well acquainted with these subjects in Swift's poem, "Cadenus and Vanessa," and several of his other works. Nor can we vouch for the truth of the oft-told story of the cause of her death: How she wrote to Stella and asked her whether she was married to the Dean or not; that Stella enclosed the letter straight off to Swift; who, having read it, flew into a rage, took horse, and rode off to Celbridge; terrified Vanessa by the fury of his looks, flung down the letter, and left her in a faint! And how her agitation produced a fever, which in a short time terminated her life!! (See "*Blackwood's Magazine*" for May, 1876, where these fictions are fully disposed of.)

After the death of "Vanessa" Celbridge Abbey was purchased by Arthur Price, D.D. (son of the Rev. Samuel Price, Vicar of Straffan, Co. Kildare), consecrated Bishop of Confort in 1724; translated to Ferns and Leighlin, 1730; thence to Meath, 1735; and advanced to the Archbishopric of Cashel in 1744. His memory is not had in good esteem in Cashel, from the circumstance of his causing the ancient Cathedral on the Rock, the chance of which was then used for Divine Service, to be unroofed and dismantled, under the authority of an Act of Parliament.

Archbishop Price died at Celbridge Abbey, on the 17th July, 1752, and was buried in Leixlip Church.

After the death of Dr. Price, Celbridge Abbey was purchased by the Right Hon. Thomas Marlay, Lord Chief Justice of the King's Bench, who changed its name to that of

## MARLAY ABBEY,

the name by which it has been since known. Judge Marlay died at Marlay Abbey, 5th July, 1756, and was succeeded at Celbridge by his son Thomas, who built a handsome mansion about one mile and a half beyond Rathfarnham, which he named after his

family, and has been since known as "Marlay." Thomas Marlay died in 1780, when his house near Rathfarnham was purchased by the Right Hon. David La Touche, P.C., who died at "Marlay" on the 1st August, 1817, at the patriarchial age of 88 years, and for 40 years a member of the Irish Parliament.

After Thomas Marley took up his abode in his new residence, "Marley," near Rathfarnham, he gave "Marley Abbey" to his brother, George, Bishop of Dromore (1745-1763), who died on the 23rd October, 1763. Marlay Abbey, at Celbridge, however, will ever be associated with the memories of DEAN SWIFT and ESTHER VON HOMRIGH.

#### (CONCLUSION).

As these series of articles on the history of St. Woolstan's and its neighbouring villages, which begun in our issue for 1st of April of this year, are what may be called a supplement to our history of "Old Dublin Fountains," we shall now conclude that history by giving a complete list of the number of those fountains, and the cost of erecting them, that were in existence in the year 1805:—

"A List of the several Fountains erected by the Corporation, for Paving, etc., in the City of Dublin, from 1784 to 1805."

Audoen's Arch	1	Merrion square	1
Abbey street	1	Mount Brown	1
Barrack street	1	Norfolk market	1
Blackhall street	1	Ormond quay, lr.	1
Bolton street	1	Ormond quay, up.	1
Butter market	1	Palace street	2
Church street	1	Paradise row	1
City quay	1	Plunket street	1
Clare street	1	Redmond's hill	1
Coal quay	1	Ross lane	1
Cole's lane	1	Sackville st., near	
Combe	1	Britain street	1
Dame lane	1	Sackville st., near	
Drury lane	1	Henry street	1
Fish-market	1	Smithfield	1
Francis street	1	Stephen's Green	1
Hamilton's row	1	Stephen st., near	
Inns' quay	1	Golden lane	1
James's street	1	Stephen st., near	
John's lane	1	William street	1
Keinstreet, lower	1	Thomas street	1
Leeson street	1	Townsend street	1
Mary street	1	Usher's court	1
Merchants' quay	1	Ushers' quay	1

Total expense of erection, repairing and, supplying water to same, from 1784 to 5th January, 1805—£10,889 13s. 11d.

(END OF OLD DUBLIN FOUNTAINS.)

## Engineering.

### THE CONDITION OF RATHMINES

EVIDENCE BY ENGINEERS.

Evidence for Rathmines in opposition to the Dublin Corporation (Boundaries Extension) Bill was continued before the Committee of the House of Lords, the Duke of Northumberland presiding.

Mr. F. B. Dixon, Engineer to the Rathmines Commissioners, stated that the main drainage of the township was carefully attended to, there being 653 inspections last year. There had been no complaints as to the impurity or insufficiency of the water last year. The Commissioners decided to supply filtration beds, and the work was being rapidly carried out. The roads of the township were in a very fair state, more than £2,000 being expended in road repairing last year. The watering of the roads was carried on as far as possible to avoid the grumbling of cyclists if there was too much water, or complaints of the residents of dust. Four million gallons of water had been used on the roads of Rathmines in the months of April, May, and June this year. The fire brigade was good. The pressure of water in the day was 90 and at night 110. This was sufficient for

all their purposes. There had been no fire they could not cope with in the township since he had been there. The township had a disinfecting chamber, with all the necessary arrangements.

By Mr. Fitzgerald—The fire at Pim's works was a difficult matter to contend with, and the Rathmines hydrants were not equal to the strain. They were then glad of the use of the Dublin steamer. He knew the Cyclists' Touring Club complained of the condition of their streets three years ago.

Mr. Hassard, Civil Engineer, was recalled for Rathmines. He said he was called on to provide a water supply for Rathmines after the failure to obtain a guarantee of full supply from Dublin. A Bill was promoted, and opposed in both Houses of Parliament by the Dublin Corporation. But the Bill passed, the works were completed, and Rathmines had had a good supply ever since, even being sufficient for the great drought of 1893.

By Mr. Fitzgerald—About two-thirds of their water was running to waste through their sewers.

Professor Reynolds said the original supply of Rathmines water was very good. Filtration would now restore it to its former good condition, and filter beds were being laid.

Mr. Kaye-Parry, at one time Consulting Engineer to the Sanitary Association of Dublin, said matters in the city were in far from a satisfactory condition. There were two unsanitary places in Rathmines, which were being remedied. He had seen nothing in Pembroke so insanitary as he had seen in the city.

Dr. Brown, Medical Officer of Health for Rathmines, said the death-rate in Dublin from zymotic disease was much higher than Rathmines. The water supply was satisfactory up to the end of last year, and then complaint was only as to discoloration. This was being remedied by filtration beds.

This closed the case for the opposition.—*Dublin Evening Herald.*

DUBLIN, WICKLOW, AND WEXFORD RAILWAY.—The following circular has been sent to the shareholders by the chairman of the Dublin, Wicklow, and Wexford Railway Company:—As was explained to the shareholders at the half-yearly meeting, held last February, the commencement of the work of construction of the company's extension line to Waterford has been delayed by circumstances which had not been anticipated, but the preliminary arrangements for the work have now been completed, and it is proposed to begin operations at once. In the interval which has elapsed since the passing of the former resolutions the plans and estimates of the new line have been submitted to a careful re-examination, the result of which fully confirmed the judgment arrived at, and your directors thereupon advertised for tenders, and have accepted the tender of Messrs. S. Pearson and Son, Limited, of 10 Victoria Street, Westminster. The proposed absorption of the system of the Waterford, Limerick, and Western Railway Company by the Great Southern and Western Company has so changed the circumstances since the special general meeting, held on December 18th, 1897, that a modification of the arrangements then contemplated has become necessary, and your directors are advised by counsel that the best way to do this is to rescind the resolutions then passed, and to substitute fresh ones. Resolutions will accordingly be submitted to the shareholders at the special general meeting, rescinding the resolutions of December 18th, 1897, and empowering your directors to carry out the separate undertaking in the manner suitable to the change of circumstances referred to. Your directors believe that the importance for the welfare of the

company of the construction of this line, which will connect our system with those of the south and west of Ireland, cannot be over-estimated, and they commend the proposed resolutions to your acceptance with confidence."

BELFAST REFUSE DESTROYER.—The Belfast authorities are still in a state of indecision with regard to the proposed refuse destructor. The most suitable type to adopt seems the stumbling point now. Three tenders for the work have been submitted in response to the invitation of the Health Committee, the amounts of which are given below. But so far the committee have been unable to arrive at any definite decision in the matter. The estimates were sent in by Messrs. Goddard, Massey, and Warner, Messrs. Beaman and Deas, and the Horsfall Company, and are here numbered 1, 2, and 3 respectively, the tender of the last named dealing with the first three items only. (1) Capital outlay for complete destructor, £9,776 7s. 6d.; number of cells, 12; capacity of each cell per 24 hours, 10 tons; total wages for 52 weeks, £1,123 4s.; total cost of burning for one year at contractors' offer, £1,200; annual cost of repairs £66 13s. 4d.; total cost per annum, excluding credits for sales and payments for burning, £1,923 12s. 8d.; total rate per ton of refuse consumed, 1'20226s. (2) £22,129; 12; 15 tons; £2,880 16s.; £2,800; £550; £1,837 1s. 5d.; 2'0154s. (3) £22,600; 12; 10 tons.

BELFAST.—The Electric Committee has given an order to Mr. James Proctor for a mechanical stoker at £164 15s. (the lowest tender).

BELFAST.—The charges for electricity have been altered as follows:—(1) for motor and heating purposes—4d. per unit for the first hour's use of the consumer's maximum demand per day (for 182 days each half-year, 1½d. per unit for all used afterwards; (2) for current consumed between the hours of 11 p.m. and 6 a.m.—2½d. per unit for the first hour's use of the consumer's maximum demand per day (for 182 days each half-year), 1½d. per unit for all used afterwards.

SOUTH KENSINGTON MUSEUM.—The question put to the First Commissioner of Works by Captain Norton, as to the proposed one-story gallery across the inner quadrangle of South Kensington Museum, which, he said, "would greatly detract from the architectural beauty of the buildings," entirely ignores the real point of the matter, which has a most important bearing on the plan of the completed building. Without this corridor the internal lines of communication of the plan will be very circuitous and rather bewildering to visitors. The proposed corridor will furnish a central route from the front entrance to the central point of the existing buildings, and it will, moreover, give an internal effect which will more than compensate for breaking the unity of the lower story (only) of the quadrangle. The objectors have evidently not studied the plan, and do not understand the importance of the central corridor in regard to plan. The request of the First Commissioner "to consult with other authorities on architecture as to the effect which this gallery would have on the quadrangle" seems rather an impertinence to Mr. Aston Webb, who understands the requirements of the plan better than any one else, and who would be the last person to wish to introduce any disturbing feature into the existing building except to gain a more important improvement. If the central corridor is not allowed to be added now, it will probably be found that it will have to be added later on, for the convenience of the public.—*Builder.*

## Our London Letter.

A SEASONABLE innovation is to be made in the new theatre for Mr. Charles Wyndham, which is rapidly approaching completion; it is proposed to construct a roof garden over the auditorium and cover it in with a construction of iron and glass.

Access will be obtained by means of a lift and the gallery staircase is to be carried up to the roof as an emergency exit: the use of the garden is confined to the occupants of the stalls and dress circle, and will be only available between the acts; it is to be assumed that the enclosure will be heated and arranged as a winter garden, and it should prove an attractive feature, which if successful, will no doubt in time be considered a *sine qua non* in the designing of new theatres.

The historic Church of St. Mary le Bour is reported to have developed serious cracks and settlements, owing, it is alleged, to the undermining of the ground by the Great Central Railway, the church fabric Committee met last week, when it was decided to obtain the opinion of an engineer.

The matter is of more than ordinary interest as the church is one of Wren's, and was erected to replace the old church destroyed in the great fire.

The tower is a fine piece of work and though it has subsided slightly, no fracture is yet apparent, but in the vestibule between it and the church, the strain has resulted in several cracks, and it is quite possible that the edifice may have to be rebuilt, the report of the engineer will be awaited with considerable anxiety by those responsible for the safety of the famous structure:

One of the many uses to which the ingenuity of the American electrical engineer has applied the forces under his control is the illuminating of fountains by electricity, and though the idea is by no means a new one, it is expected that the form they will shortly assume at the Crystal Palace will put in the shade anything of the kind hitherto attempted, and provide the finest display of its kind in the world; it is difficult to describe concisely how the effects will be produced, but it may be stated that, under the fountains, large underground apartments have been constructed and filled with electrical apparatus, including two vertical triplet pumps worked by motors, and able to throw a jet of water 200 ft. into the air, while the switch boards give an automatic control of the amount of current; the roof is pierced with funnels topped with plate glass at the water level underneath each of which is a powerful arc light and projector between which and the funnels are the coloured glasses by means of which the effects are produced.

The whole of the machinery is controlled by one man from a "crows nest" on the garden front of the Crystal Palace in which are over 600 wires connected with the fountain.

The installation has cost something like £15,000, but if its success here is commensurate with that obtained in Philadelphia and Brooklyn, this outlay will not be deemed excessive.

The successful intervention of the editor of the *Daily News* in the recent plasterers dispute has led to his being asked to use his influence with regard to the building trades dispute in Yorkshire, with the result that a meeting was held at Derby on June 5th, and a basis of settlement submitted to both sides. The men, however, declined to accept it on their part, and urged that the conference had been held at too short a notice, and desired to submit certain proposals of their own. In the meantime, Mr. Clement Edwards, of the *Daily News*, went north, and interviewed the interested parties, and the National Association of Master Builders having invited the representatives of the Trades Unions to meet them at a conference in London on July 27th, the lock-out was withdrawn, and the conference took place as stated, and a scheme for the establishment of a Board of Conciliation discussed and approved, subject to confirmation by the members of the various operative Societies, the principal of arbitration and conciliation being unanimously accepted by both sides. The conference then adjourned for a month or so when another meeting will take place in London, from which the best results are anticipated.

The sanitary disposal of town refuse is, more particularly in pioneer districts, a question calling for the exercise of considerable skill and ingenuity, and the system employed at Bulawayo is, as original as it is, effective, the idea being to bury in trenches the whole of the refuse taken away from the town each night, cover it over with soil at once, and plant in it saplings selected for their timber bearing properties. Trenches are dug into which first the night soil is put, then the dust bin refuse, till the trench is two-thirds full, and then the earth filled in. At the present time red gums are being planted, the timber of which is very useful for all structural purposes, and in about ten years' time is ripe for cutting.

A similar system has been introduced in Kingwilliamstown and other places with most encouraging results.

The action of the West Ham Town Council in their dealings with their surveyor, Mr. Louis Angel, have been the subject of much adverse criticism; and very deservedly so, for here is a case of a man, after 32 years faithful service, receiving notice to leave, for, apparently, no reason whatever. Municipal posts are already noted for their insecurity, and this last exhibition of official despotism will still further enhance this feeling. Formerly a surveyor could not be removed without the consent of the General Board of Health, and it would be well if the Local Government Board were vested with similar powers.

The London County Council Dust Cart Competition met with very liberal support. There were no less than 325 competitors, of whom two sent full-size carts and two ditto vans, while there were 53 models, 250 plans, and 18 suggestions.

The Chairman of the Council of the San. Inst., Mr. Henry Law, A.M.I.C.E.,

was the assessor, and awarded the premium of £25 to Messrs. W. Glover and Sons, of Warwick, who sent a full-sized dust-van, having four sliding covers, with longitudinal and transverse wind-guards raised about 8 inches above the covers, with serew tipping gear and driving box.

It is proposed, subject to the approval of the competitors, to hold a public exhibition of the models and designs at the Parker Museum, Margaret Street, W.

The Society of Architects last week paid a visit to Canterbury, where they inspected the Cathedral under the guidance of Canon Carter, whose intimate knowledge of its history and architecture enabled him to place before the members, during the limited time at their disposal, just those main points of interest most likely to be appreciated by architects. A complete tour of the building was made, commencing with the crypt, and including the cloisters and chapter-house, the recent decoration of which was the subject of considerable criticism; finally arriving at that most interesting of all spots, at least historically, the Chapel of the Martyrdom, the scene of Beckett's murder. Time not permitting of further investigations, the party proceeded to St. Margaret's, at Cliffe, near Dover, where the fine old Norman Church attracted much attention. Afterwards the President, Mr. T. Walter L. M. Emden, J.P., L.C.C., entertained the members to dinner at the Granville Arms Hotel, and an exceedingly pleasant and profitable day was brought to a close.

THERE is hardly any business or profession open to men which is not equally open to women, and architecture and its allied arts, crafts, and sciences are no exception to the rule. Attention has already been drawn in these columns to the advent of the lady architect and at a recent examination, for Inspectors of Nuisances, held at Liverpool, under the auspices of the Sanitary Institute, out of 37 candidates who qualified, 5 were women; now, though it is not difficult to realize that architecture may be a congenial and useful study for the fair sex, if not adopted seriously as a means of livelihood. It is not so obvious where the attraction lies in the case of the inspecting of nuisances, unless it be that the pay attached to official appointments of the kind, although in many cases very inadequate, yet is better than that attainable in some other spheres of work, and the duties however unsavoury, are not necessarily unladylike, though to undertake them, argues a strength of mind generally associated with the newest woman.

## STRIKE AT GIBRALTAR.

There is a strike among the men working on the dockyard extension. It appears that water for drinking was refused to the workmen on Saturday, so they immediately stopped working. When they were paid, the same day, one half day's pay was deducted from their wages. They now claim an increased wage. On the other hand, it is rumoured that the contractors intend reducing the actual wages and making the workmen pay for the water they consume for drinking. Five hundred men are on strike. — *Morning Leader*.

## Correspondence.

ENGINEERS FOR CARLOW AND  
GLIN COUNCILS.

TO THE EDITOR IRISH BUILDER.

SIR,—I have clipped an advertisement (enclosed) from the *General Advertiser* of the 29th July, being from the Carlow No. 1 District Council. This public Board requires the services of a "properly qualified Engineer," and further, "the duties of the office to be discharged in person, and not by deputy." "The appointment to be terminable at the pleasure of the Council." Happy man, he who shall have the distinguished honour of being appointed to fill this important office at £100 a year! Things must be looking bad for graduates of old Trinity, the Royal, and even the County Councils.

The gentleman appointed must be "fully qualified," must be always at the disposal of his employers, perform his duties in person, pay his own travelling and incidental expenses, and be prepared to take his dismissal at any time his employers may think well to give him the sack. If this be an index of public appreciation of the value set upon the services of a member of one of our most respected and learned professions, it reveals a very disheartening state of things indeed. Still I do not think it is as bad as what follows.

In the case stated above we have the estimate put by a public Board on the services of a fully qualified engineering practitioner, who will have to provide his own office, do all his own drawings, and supervise all the works of the District Council in person. But bad as this is, it is princely compared with the estimate put upon engineering services by a said-to-be professional gentleman. I clip the following from the *Freeman's Journal* of July the 31st, *re* appointment of an Engineer to the Glin Rural District Council, and the paragraph runs as follows:—"At a meeting of the Glin Rural District Council on Saturday [presumably Saturday, 29th July] the position of Engineer to the Board was filled. The candidates were—Francis T. Hortigan, C.E., Rathkeale, and Mr. D. Leahy, C.E., Newcastle West. Mr. Hortigan was appointed, as he undertook to carry out the work in connection with the building of the labourers' cottages in the district for the sum of 10/- per cent. on the outlay. Mr. Leahy's tender was £2 10s. per cent."

What a strange state of professional things these two incidents reveal! In the first place, we have a public Board offering terms and conditions that no fully qualified professional gentleman could see his way to accept at the price offered. In the second place, we have a man stated to be a C.E., offering of his own free will to carry out work at 10/- per cent.—a most unheard of commission. Mind you, I am (not knowing to the contrary) supposed to be dealing with fully qualified Engineers only; and if this be so, what do the facts reveal? Well, to my mind at least, they show a very sad state of things for the profession of Architecture and Engineering, and they go a long way to prove a very radical defect in the constitution of professional practice.

In the Glin case we have the recognised 5 per cent. standard commission reduced to one-tenth, which shows how badly we want protection and association. Take the building trades, for instance, and I defy you to get the meanest tramp that stalks the country to come on to a job, and offer his services for one-tenth the standard rate of pay paid to operatives of his particular trade or calling. No; the local handy-man is the only sneak who will worm himself into a job at any price.

I do not find the name of either of the above candidates recorded in *Slater's Irish Directory*, which, in my opinion, records

the names of all professional practitioners in every town in Ireland. The time has long since come for Architects and Engineers to combine and seek State protection of some kind. No man should be allowed to practise who had not fully qualified himself for the position, and being qualified he should be paid a fair and reasonable remuneration for his services.

VITRUVIUS

[We received the foregoing letter just as we were going to press so have no space to criticise the action of these bumbles. It is high time, indeed, that the law should step in and protect the public as well as the profession.—ED.]

## Legal Items.

## ARCHITECTS' FEES AT CORK.

(Before Mr. Justice Madden.)

His Lordship entered the County Court at Cork, and resumed the hearing of the city special record of

*Brunton v. Connell and Daly*, in which the plaintiff, Robert H. Brunton, C.E., of 8 St. Martin's Place, London, sought to recover from Messrs. John Connell and Wm. V. Daly, of this city, £459 13s. 0d. for work, labours, and services rendered as architect for the defendants in connection with the Royal Victoria Hotel; the Criterion, Liverpool, and other places.

The plaintiff was cross-examined at length in regard to the various items in his bill.

John Barry O'Callaghan, Engineer, London; W. H. Hill, Architect, Cork; William O'Connell, Builder, Cork; and Mr. J. Neighbour, of the firm of Neighbour and Co., Architects' Surveyors, London, were examined as to the details of the work, and gave expert evidence.

The defendant's case was then gone into. The defendant, Mr. John O'Connell, was examined, and said he made the acquaintance of the plaintiff at the building of the Palace Theatre, Cork, in 1896. At the time the defendant and others contemplated an extensive hotel-buying scheme, and the plaintiff was aware of the proposed speculation, as a portion of which the defendant purchased the Victoria Hotel, Cork, in February, 1896. The plaintiff submitted him plans for the improvement of the hotel. The plaintiff, accompanied by Mr. Neighbour, visited some of the best-equipped and most modern hotels in the West End of London, and the defendant submitted plans to him in which the proposed improvements to the Victoria Hotel would cost £5,000. Defendant said it was absurd, that he could not dream of spending such an amount of money. He said defendant could use the plans for the amount of the work done, and he could do any portion of the work he wished. The plaintiff never mentioned anything to define the charges he made for travelling and other expenses.

Other evidence having been given, the jury found for the plaintiff, and awarded £250 damages.

## ANCIENT LIGHTS.

HEALY v. O'ROURKE.

This was an application on behalf of the defendant for an order to remove a perpetual injunction, granted in 1890, in respect of certain premises in Lord Edward Street, Dublin, restraining the defendant, a lessee under the Corporation, from building or continuing to build so as to interfere with ancient lights of the plaintiff's adjoining premises, the plaintiff being also a lessee of the Corporation.

Mr. Rynd, with whom was Mr. T. M. Healy, M.P., Q.C., appeared for the defendant, and said the ground on which the order was asked for was that in 1885, after

the granting of the injunction, both parties having to obtain extensions of the new leases from the Corporation to an agreement between themselves whereby it was agreed that if the plaintiff obtained his new lease he would consent to the withdrawal of the injunction. The new lease was granted to him, and all the conditions of the consent were fulfilled; but when a formal consent for dissolution of the injunction was tendered to the plaintiff for signature he declined to sign it, and alleged that a previous letter of his was sufficient in itself.

M. Oulton (instructed by Mr. John W. Elliott) appeared on behalf of the plaintiff to oppose the application. He relied on a letter written in May, 1897, as a sufficient compliance with the terms of the agreement. He contended, that at all events, the plaintiff was entitled to have the defendant's undertaking in pursuance of the agreement of 1895, recorded in the order dissolving the injunction.

Mr. Rynd assented to this course, and an order was made dissolving the injunction.

## PARTY WALL AT DERRY.

(Before Mr. Justice Kenny.)

This was an action for trespass and damage to a wall at the end of Kennedy-place. The Recorder granted a decree for £4, but held that the wall was a party wall. From this decision both parties appealed. Messrs. Robert Knox, Hardress E. Waller, and James Stewart, as trustees for the Skipton estate, owners of the ground rents, were joined as plaintiffs with Mr. Alexander Ayton and Joseph Love, owners of houses in Kennedy-place. The defendant was Mr. T. C. Wyley, the purchaser of the ground on the other side of the wall in question. Kennedy place has been a *cul-de-sac* since 1868. The wall was built by the plaintiff Ayton and Robert Ferguson, predecessor in title of the plaintiff Love.

Dr. Wylie, Q.C. (instructed by Messrs. Knox and Gilliland), in stating the case for the plaintiffs, stated that the defendant had knocked down the wall in order to raise the value of the small houses he had recently built beyond the wall, by giving a passage through. The effect of the wall being knocked down was that the Kennedy-place houses would be depreciated. Council explained that when the wall was being built the plaintiff Ayton and Ferguson merely excavated as far as their own property, and did not go into the adjoining property, where there was a steep bank surmounted by a hedge. The custom in regard to walls was that the projecting part of the foundations was taken to represent the limit, and he asked his lordship to hold in accordance with that custom. As a matter of fact there was no map accurately showing the boundary, and in the absence of conclusive evidence he contended the judge should decide upon evidence of actual use, and the plaintiffs had built and repaired the wall from time to time. More than that, in 1894 they got from the Recorder a decree for £5 against Mr. T. S. Magee for trespass and damage to the wall. Counsel submitted that the Recorder's decision that this was a party wall was wrong in law. Even if the wall was beyond the limit of the Skipton's boundary the exercise by the plaintiffs since 1866 of the rights of ownership gave them title.

Mr. Cooke, Q.C., with Mr. Osborne (instructed by the defendant), stating the case for the defendant, produced Mr. Wylie's title deeds of the property now consisting of Kennedy-street, arguing that the defendant's property included the ground upon which the wall stood.

Mr. Justice Kenny said he had the evidence of Mr. Ayton and Mr. Colquhoun. Mr. Ayton had two houses in Kennedy-place

for a very long period. He distinctly remembered the circumstances of the building in 1865. He said a space was left between the wall and the perpendicular bank. They did more than leave that for at the top of the embankment there was a hedge, and according to Mr. Ayton and according to the evidence of Mr. Colquhoun, the agent, after the wall was built the hedge remained. His Lordship must take the hedge as the boundary of the premises, and if the evidence was correct—and he had no reason to doubt the evidence of these two gentlemen—the wall was built upon the Skipton estate and upon no other property. Mr. Ayton was confirmed by Mr. Colquhoun, who said the hedge was the old mearing fence. The *cul-de-sac* had existed for thirty-five years. In addition, in 1894 he had a decree given by the Recorder against Mr. Magee for interfering with the wall. He did not consider this a party wall, and he struck out the finding of the Recorder to that effect. He held that the whole of the wall was upon the Skipton estate, and he confirmed the decree of £4 for damages against the defendant, with £4 12s. costs and £1 1s. surveyor's fee.

**WORKMEN'S COMPENSATION—NOTICE TO BUILDERS.**  
Christopher Sullivan, employed by Messrs. Good Brothers, builders, sued that firm for damages for injuries received through a fall while engaged in the demolition of some houses in Frederick Place, Dublin. It appeared, however,

from the evidence of the defendants' foreman, that no part of the structure was 30 feet high, a fact which the Recorder held rendered the case outside the scope of the Workmen's Compensation Act, and he dismissed the action. His Lordship gave notice that, in view of the importance of exact measurements in such cases, he would expect all builders before they demolish houses to have them accurately measured so that the height could be proved in court if necessary.  
Messrs. Ennis and Machin, solicitors, appeared for the plaintiff, and Mr. T. J. Smyth, B.L., for the defendants.

**THE LONDON BUILDING ACT.**—The Queen's Bench Division of the High Court of Justice has decided that a public-house does not come under Section 74 of the London Building Act. That section requires that when a building is used in part for the purposes of trade or manufacture, and in part as a dwelling-house, these separate parts shall be divided by walls and floors constructed of fire-resisting materials. The decision of the Court seems clearly right. It was urged on behalf of the owners of the public-house that no line could be drawn between the part used as a public-house and the part used as a dwelling. This is true, especially as it has to be borne in mind that the entire building is licensed. It may also be doubted whether the section was ever intended to apply to public-houses which are only private houses where alcoholic drinks may be bought or consumed. However, be that

as it may, this case of *Carrick v. Godson and Sons* has placed the matter beyond doubt.—*Builder*.  
**KENSINGTON PALACE.**—In the Queen's Closet at Kensington Palace is hung an interesting set of paintings (removed there from the Queen's Presence Chamber at Hampton Court) of riverside and other views of London in the earlier years of last century. The pictures by W. James, which do not possess the artistic merits of Scott's similar views, show the Horse Guards and the parade ground, with Kent's Treasury Chambers, and Downing Street, from the north-west, by the Old Gun-house; Denmark (or Somerset) House, with the Temple Gardens and water-gate; the Savoy and Old Somerset House; the mouth of the Fleet, with the Bridewell Bridge; York water-gate and stairs, with the water tower built in 1692; and Greenwich Hospital and Park, with Flamsteed's Observatory and St. Alphege Parish Church—designed by Hawksmoor, the steeple being by John James. There is another view of Greenwich Park and the Thames, perhaps by Danckers, with one of the Savoy and Somerset House which agrees in nearly every respect with James's picture. The chimney-piece in the room, a relic from Westminster Palace, bears in relief the Tudor rose, the arms of Queen Elizabeth, and her cipher, "E.R." We think that a little pains might have been taken to give gratuitously to the public—by way of affixed notices or distributed leaflets—some particulars of the apartments and their contents.—*Builder*.

APPOINTMENTS.				
Appointment	To whom	Salary	Last date	
Surveyor and Draughtsman, Irish Land Commission	Civil Service Commissioners ... ..	£150 to £300 a year ... ..	August 17	

COMPETITIONS.				
Work	For whom	Premium	Last date	
Sewage Scheme ... ..	Basford Rural District Council ... ..	—	August 17	
Infectious Diseases Hospital ... ..	Kirlscaldy District Clerk ... ..	—	August 17	
Isolation Hospital, Otley ... ..	Wharfedale Union Hospital Committee... ..	£30 and £15 ... ..	September 1	
Town Hall ... ..	Borough of Workington ... ..	£40, £20 and £10 ... ..	September 15	
Designs in Tunbridge Ware ... ..	Technical Education Committee, the Town Clerk, Tunbridge Wells	3 Gs., 2 Gs., and 1 G. ... ..	September 30	
Court House and Police Buildings	County Clerk, Dunoon, N.B. ... ..	£30 and £20 ... ..	September 30	
Water Supply, Birr ... ..	Parsonstown Urban District Council ..	—	—	

CONTRACTS.				
Work	For whom	Apply to	Last date	
Swivel Bridge, North Quay, Arklow ...	Harbour Commissioners ... ..	Harbour Master, Arklow ... ..	—	
National School, Point road, Dundalk ...	National Schools ... ..	Parochial House, St. Patrick's, Dundalk	—	
Alterations to Lismore Cathedral ... ..	Lismore Cathedral ... ..	The Dean, Lismore ... ..	—	
Plumbing Materials, Hardware, etc. ...	Belfast Lunatic Asylum ... ..	Clerk, Belfast Asylum ... ..	August 14	
Post Office, Dundalk ... ..	Office of Public Works, Dublin ... ..	H. Williams, Secretary ... ..	August 15	
Maintenance of Roads, Co. Armagh ... ..	Newry Rural District Council, No. 2 ...	Clerk of the Council, Newry W'house	August 15	
Timber, etc., Derry Asylum ... ..	Londonderry Lunatic Asylum ... ..	Clerk of Asylum ... ..	August 18	
Passenger Platform Shed, Derry ... ..	Donegal Railway Company ... ..	James Barton, Engineer, Dandalk ...	August 20	
Widening Spencer Dock, Belfast ... ..	Belfast Harbour Commissioners ... ..	Harbour Engineer, Belfast ... ..	September 4	

**TENDERS.**  
**LARNE.**—The Tender of James Orr, at £120 15s. 11d., for proposed extensions of the water and sewerage at Glenarm and Carnlough, according to plans and specifications prepared by Mr. James Reside, C.E., was accepted.  
**LONDONDERRY.**—For building three houses on the Chapel Road for Mr. William O'Doherty. Mr. Daniel Conroy, 2 Bishop Street, Londonderry, architect. The Tender of D. Doherty, Spencer Road, at £526, was accepted.  
**NAAS.**—For the erection of 26 cottages, in two blocks of 12 and 14 each, in the town of Naas, for the Town Commissioners. Mr. F. Bergin, B.E., architect.

T. Byre, Swordslestown, Naas	...	...	...	...	£3,900 0 0
J. Taylor, Brannottown, Co. Kildare	...	...	...	...	3,640 0 0
J. Heyland, Naas, Co. Kildare	...	...	...	...	3,328 0 0
G. Robinson, Caragh, Naas	...	...	...	(Accepted)	3,120 0 0

# ARCHITECTURE.

## ENGINEERING.

### WHAT OUR FRIENDS SAY.

*The Irish Builder* of July the 1st appears in new and more attractive guise. The proprietorship of this old-established technical journal has recently changed hands. We notice that the new controllers intend to introduce into their publication many novel features certain to invite a wide circulation. It is proposed to make a special feature of ecclesiastical notes and articles on ecclesiastical art, with special reference to modern work in progress or in contemplation, articles on mediæval and contemporary art, etc.—*Daily Nation*, 30th June.

*The Irish Builder*, which claims as its special province architecture, archæology, engineering, sanitation, etc., arts and handicrafts, begins with the present issue a new and improved series. It is well written, clearly printed, and bound in a handsome tinted cover, and should prove, especially with its new features, a publication of exceptional interest to the architectural profession and to all engaged in the building trade. We are glad to notice that it is intended to make *The Irish Builder* a medium for promoting and assisting native art and industries, a good work in which it will doubtless be able to exercise a valuable influence.—*Freeman's Journal*, 30th June.

I have much pleasure in stating that *The Irish Builder*, which has recently been purchased from Mr. Roe, will be improved and enlarged under the new proprietorship. This fortnightly, which is the oldest journal of the kind in Ireland, already shows indications of the health and vigour, which will, I hope, follow the introduction of new blood. Architects, builders, and contractors, long ago acknowledged their indebtedness to this paper, which was established nearly fifty years ago, and I wish it marked success on its start on a fresh career of usefulness.—“Sydney Brooks,” in *Irish Figaro*, July 8th.

## *The Irish Builder*

Under New Management.

Offices:

PALATINE CHAMBERS,  
63 DAWSON STREET,  
DUBLIN.

All Business Communications to be addressed to the

“IRISH BUILDER.”

Editorial Communications to

THE EDITOR

The Journal is an old established one, dating uninterruptedly from the year 1859. It is in contemplation to greatly enlarge and improve it both in regard to matter and scope.

The Proprietors confidently look to the public for support in their effort to provide a thoroughly readable, up-to-date technical journal in Ireland of a broad character, tending to promote and assist Native Industries, and the Arts and Handicrafts of the country generally. Having regard to the fact that the Paper has so long enjoyed a considerable circulation amongst the Architectural Profession, Builders and Contractors generally (an appreciation which the Management hopes to continue to merit in an increased measure), the Journal offers to Advertisers, and in particular Administrative Boards, an especially useful and direct method of Advertising. The Scale of Charges will be found reasonable.

Liberal reduction according to number of Insertions.

Advertisements should reach the Office two days before date of publication.

Published on 1st and 15th of every Month.

Advertisers blocks inserted.

## CONTRACTING.

### WHAT OUR FRIENDS SAY.

Our old established contemporary, *The Irish Builder*, is now under new management. The paper has been in existence for close on half a century, and for the last forty years has been owned and most ably edited by Mr. Peter Roe. Mr. Roe has now been compelled by advancing years to sever his active connection with the paper. Our contemporary was established in 1850 by Mr. Lyons, an architect well known in his day, and the present management have decided upon enlarging and improving it. The paper in its improved form proposes to deal not only with building, but the kindred arts and crafts—the fine arts generally, electric lighting, the antiquities of Ireland, native industries, &c. We heartily wish all success to this new venture, which supplies the wants of the members of the profession in Ireland. Nothing much up to the present has been heard of the smaller buildings put up in Ireland; we hear of the churches built there, but that is about all. We hope this journal will supply such news, for anything calculated to arouse further interest in domestic architecture deserves success.—*Builder's Journal*, June 28th.

*The Irish Builder*, which is the only journal in Ireland dealing with technical subjects, has recently passed under new management, who have several important improvements in contemplation. It is intended to permanently enlarge the paper, so that many interesting features may be introduced, which will make it in every respect a journal worthy of the patronage of all interested in architectural and technical matters generally. The object of *The Irish Builder* is to provide a thoroughly up-to-date technical journal in Ireland of a broad character, tending to promote and assist native industries and the arts and handicrafts of the country. The present issue appears in a tinted cover, which adds very much to the attractive appearance of the paper. Among the new arrangements a very interesting feature is the London Letter, the first of which appears in the current issue. A special feature also will be notes and articles on ecclesiastical art.—*Irish Daily Independent*, 30th June.

# ARCHÆOLOGY.

## ARTS AND CRAFTS.

## LOCAL GOVERNMENT NEWS.

## STUDENTS' COLUMN.

## ECCLESIOLOGICAL NOTES.

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## NOTICES.

The *Irish Builder* is published twice a Month, on the 1st and 15th, and may be ordered from any Newsagent, or direct from the Offices—13 Fleet Street, Dublin.

It is the only technical journal in Ireland, and reaches Architects, Engineers, County Surveyors, Builders, Contractors, Artisans, Council Officials, Members of Trades Associations, and Public Libraries throughout the country. A specimen copy will be sent post free to any address on application.

### Subscription (payable in advance).

Town.	s.	d.	Post.	s.	d.
Yearly - -	6	0	Yearly - -	8	0
Half-yearly - -	3	0	Half-yearly - -	4	0
Quarterly - -	1	6	Quarterly - -	2	0

### Editorial.

Literary matter and drawings to be addressed to the *Editor*, and must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. We do not hold ourselves responsible for the opinions of correspondents.

Notes of works (especially contemplated works), contracts, reports, &c., are always welcome. Drawings and photographs are particularly acceptable.

### Publishing.

All business communications to be addressed to the *Manager*. Advertisements must reach the office two days before the date of publication. The charge for Contracts, Notices, Prospectuses, Competitions, &c., is 6d. per line. Other advertisement rates can be had on application.

### Payments.

Cheques and Postal Orders to be made payable to The Proprietor, *Irish Builder*.

Owing to want of space we have been compelled to hold over an account of the Architectural Association's Annual Excursion to Salisbury.

## COMMENTS.

### Ourselves.

With this issue we appear as an old friend with a new face, standing on the threshold of a rejuvenated career. Since the new Managers took this paper over from Mr. P. Roe in June last, it has naturally been passing through a state of transition, and our arrangements hitherto have only been temporary, but we now hope to begin settling down to a somewhat more permanent form. The new heading on the outside of the cover has been kindly designed for us by Mr. R. Caulfield Orpen, M.R.I.A.I., of Dublin, and it has been thought advisable to change the tint of the cover to a lighter shade. We trust the other improvements will also commend themselves.

We may here remind our readers that the *Irish Builder* is the only technical journal in Ireland, and we will do our best to increase its sphere of usefulness, and to promote and assist native industries, and the arts and handicrafts of the country generally. Originally started as the *Dublin Builder* in 1852, by Mr. Lyons, an architect well known in his day, it passed into Mr. Roe's hands in 1859, and became familiar under the broader title of the *Irish Builder*. Our veteran paper has thus had an unbroken record for close on half a century and no effort will now be spared to make it a thoroughly up-to-date publication. Further amendments will be made as we go along, for it takes time to get into working order.

Among special articles promised us we may mention "Old Irish Palaces and Universities," by Mr. M. J. C. Buckley of Youghal, Mr. Buckley being director of the Decorative Arts Guild; a series of papers on "How to Estimate, or the Analysis of Builder's Prices" (containing hundreds of prices), and "Builder's Tools and their Uses" (300 illustrations). We venture to predict that the two latter will be the most practical and complete articles of the kind that have ever been published.

Should we get sufficient support we will reduce the price of our journal, and if possible bring it out weekly.

Owing to our rapidly increasing circulation, and enlargement of staff, we have changed to more suitable Offices at —13 Fleet Street, Dublin.

### Electric Tram Accident, Dublin.

The recent accident, by which six or seven persons were seriously injured, draws attention to a method of electric traction which not only disfigures the streets, but is dangerous to the lives of the inhabitants. The Corporation have expressed their strong conviction that, to prevent the recurrence of similar accidents, it will be necessary for the Company to provide for each car, a driver or motor man, a conductor to start and stop the car, and a collector of fares.

The surface contact system and the conduit system are most in favour with the London County Council, who are now considering the subject. The former has been successful in Paris and other cities, while the chief objection to the latter is its costliness. A deputation of members from the Glasgow Corporation visited Dublin a few weeks back to enquire into the working of the electric tramway system. We trust they will take warning accordingly.

### Attempted Dismissal of Engineer.

A very improper attempt was lately made at the Cork Board of Guardians to dismiss Mr. Coakley, the engineer, and one of the oldest officials of the Board. That there was little sympathy with the proposal of the Visiting Committee was shown by its rejection by 14 votes to 5, and in a full Board the majority in favour of the engineer would have been twice as large. But it was bad enough that an attempt was made to remove an old servant, and if Mr. Coakley was at fault the Board might surely have warned him. No man can give his serious attention to public work if the tenure of his office is so uncertain.

### St. Anne's Church, Belfast.

There seems to be some concern in Belfast as to the future of the Parish Church of St. Anne's, with all its past associations. Its site has been selected for the Protestant Cathedral, the foundation stone of which will be laid on the 6th inst., and it is presumed that St. Anne's will be pulled down. Classic in style, it is built in the fashion of Wren's city churches, having a tower in front, with attached columns and picturesque cupola. It would certainly be a pity to destroy such an old landmark, but Linenopolis wants a cathedral and another site cannot be had.

## IRISH MATERIALS USED IN ROAD-MAKING

### AND OTHER MUNICIPAL WORK.

WITH SPECIAL REFERENCE TO THOSE PROCURABLE AND USED IN THE NORTH OF IRELAND.

*Paper read in connection with the "Surveyor" Exhibit at the Building Trades Exhibition, London, 1899.*

By J. MUNCE, A.M.I.C.E., Assistant City Surveyor of Belfast.

Municipal engineers, as a rule, lead such busy lives that the writer claims their indulgence for the shortcoming of the following notes, which have been prepared in the late hours of the night and early morning, no other time being available owing to the strain of special business in hand at present. These notes are intended to call attention to some of the materials used for municipal purposes, which can be procured at reasonable prices, and with which the writer is familiar.

For many years fireclay sewer pipes have been made at Coalisland, near Dungannon, but until recently no attempt was made to produce an article approaching the Lancashire or Scotch pipes in finish. At present, however, manufacture is being much improved, and it is possible that before long a pipe will be produced which will be able to compete favourably for local use with imported goods. Boulder clay abounds in the vicinity of Belfast, and from it all qualities

of bricks are produced. The exhibits of the Lagan Vale Company and the Annadale Company show the best qualities of facing bricks, while Mr. John Thompson shows an ordinary sewer brick which is absolutely free from lime. Perforated bricks are generally used for external facing, and pleasing effects can be produced by selecting the bricks of various tints, varying from pale Indian red to dark red—almost chocolate. The custom is to select the bricks for facing and use the others for inside work. Large quantities of bricks are exported from Belfast. Ornamental bricks are made in great variety, as may be seen by the catalogues of the two companies mentioned above.

There are quarries producing good sandstone—white, pink, and grey—at Scrabo, eight miles from Belfast, and red sandstone, not unlike Dumfries, at Dundonald; but these quarries are not extensively worked, as the demand is not great in the vicinity. The output from Scrabo last year was about 13,000 tons. There are quarries at Dungannon producing a fine sandstone of close grain, which is much used all over the north of Ireland. Very good stone also comes from Glasslough, Co. Monaghan. It reminds one of the Yorkshire stone. Blue stone, locally known as whinstone, abounds in Co. Down, but the quality varies greatly. The stone from the deeper beds is the best and most uniform. The samples shown by Messrs. C. Ritchie & Sons, of Connswater, Belfast, and Messrs. Robb, of Belfast, from the Ballygowan quarries, give an idea of the material. Members of the Association of the Municipal and County Engineers who attended the Belfast meeting will remember that for some miles the County Down Railway runs through cuttings in this material. Extensive quarries are worked by Ballygowan, and the manager of the Belfast and County Down Railway will be glad to put any member into communication with the quarryowners. The setts and macadam are extensively used in Belfast and Co. Down, and are also exported to the north of England, the output by rail last year being about 53,000 tons.

Basalt or trap rock, locally known as blackstone, is to be found everywhere in Co. Antrim, and numerous quarries are worked all round Belfast. It is not, as a rule, a good stone for setts, as, owing to numerous veins, it splits under the rammer. It makes good stone for rubble masonry, as blocks can be had of any size, and it can be worked to a fair face. Both whinstone and blackstone make good macadam, labour being comparatively cheap; it can be delivered, hand broken, at 4s. per ton in Belfast, and machine-broken, screened, for 3s. 6d. to 4s. per ton. Both prices are subject to fluctuation, according to the season. Whinstone setts have the merit of being non-slippery, and give good wear for moderate traffic. One is exhibited which has been under traffic in Chichester Street for over twenty years. Some years ago a street was paved with selected blackstone setts from a quarry in Co. Antrim, but although it had the merit of safety for horses and uniform wear, it wore down so fast that stone from that quarry is now only used for channels. Whinstone is also used for crossing blocks and kerbs, but granite is generally preferred.

Ireland has an unlimited supply of granite of all colours. The name "Newry Granite" is well known, but I may say that strangers to the locality apply this name to all granite quarried from Newcastle to Goragwood and Bessbrook, a distance, as the crow flies, of 20 miles, or 30 miles by road. The Mourne Mountains are almost entirely granite, and in the new waterworks for Belfast, now being constructed under Mr. L. L. Macassey, M.I.C.E., there is a tunnel through granite 3,766 yards in length. The base of the Albert Memorial, in Hyde Park, came from the Ballymagreeghan quarries, at Castlewellan, near Newcastle. These are now being worked by Messrs. Robinson, who show samples of kerbs, setts, &c. This stone can be obtained in blocks of any size, and is largely used for monumental purposes, which use pays better than for kerbs, setts, &c.

At Annalong and Kilkeel, on the coast road from Newcastle to Rostrevor and Newry, there are extensive and well-known quarries, from which large quantities of kerbs, crossing blocks, and setts are sent to Belfast and England. The quarries at Newry, Bessbrook, and Goragewood are known all over the country. Blocks, any size, can be produced, and can be delivered either rough or wrought and polished. The kerbs and setts are of good quality, and can be produced in any quantity. The conveniences for transit by sea or rail are ample. A quarry at Rostrevor produces syenite, which makes a capital sett, but for some reason it is not worked very extensively. An official, recently deceased, stated to the writer that stone from this quarry has been under traffic in Belfast for forty years: but the writer has been unable to obtain a sample.

Flags of first-class quality are procurable from counties Clare, Carlow, Kilkenny, and Leitrim. Two colours come from Clare—light grey and blue. The Liscannor Quarry Company exhibit samples. The light-coloured flag has only been in use for a few years in Belfast, but gives great satisfaction. The owners, knowing the value, do not cut the price as they can sell all they produce at better prices than we offer. The blue flag has been in use for over forty years. A sample, which has been in the footway of Queen's Bridge approach for thirty years, is exhibited. An idea of the traffic on this footway may be formed when it is known that it is in the direct route to the shipbuilding yards, employing 16,000 men, one-half of whom pass over: it leads also to a railway terminus, through which over 4,000,000 passengers and 201,500 tons of goods pass annually, and forms the leading route between the countries of Antrim and Down. These flags are delivered on the quay, Belfast, at from 3s. 3d. to 3s. 9d. per superficial yard, hammer-squared. Cartage to yard, dressing, carting to work, and all expenses of laying, make the total cost 6s. per yard, laid complete, for 2½ in. thick and upwards, 2-in. flags costing about 1s. less.

Two Carlow flags, which have been in leading streets for forty-two and thirty-eight years respectively, are also shown; but no flags from this district have been offered for sale in Belfast for many years. The writer is unable to trace the quarries from which they came, but the man who laid them gave the information as to the dates. A very good flag comes from Arigna, Co. Leitrim, but, owing to high railway rates they, have not being able to compete with Kilrush flags in Belfast. One or two were laid as a sample years ago, and show no signs of wear to-day. Mr. S. G. Fraser shows some samples of flag, kerb, channel, setts, and building stone from his quarry at Glenfarne, Co. Leitrim. The flags, kerbs, and channels have been supplied to the Dublin and Sligo Corporation, the Enniskillen Town Commissioners and the War Office.

Artificial flags have been extensively used for many years, and have assisted to keep down the price of natural stones. The principal supplies come from the Ferrumite Paving Company, of Belfast; the Shap Granite Company, Cumberland; and the Threlkeld Granite Company, Cumberland; and samples are exhibited by each firm. The price varies from 3s. 4d. to 3s. 9d. per yard for 2-in. flags. They are composed of crushed granite and Portland cement; but the Ferrumite Company immerse their flags in a bath containing, according to the company's description, "chemicals—chiefly iron," which they affirm has a material effect in increasing the life of the flag. The chief objections to artificial flags are the expense of repair after a trench has been made in a footway for gas, water, electric, or other mains. The writer's experience on this head is that three times as many artificial flags are broken as is the case in similar work where natural flags are used. In dry weather an old flag here and there

becomes polished and slippery, and in frost porous flags become seriously damaged. On the other hand, the advantages are—the flags can be made to suit the width of footway exactly, thus securing uniformity of break-joint, and the facility with which a broken flag can be replaced by one of the same size is obvious. A flag made by the city surveyor's staff, at a cost of 2s. 3½d. per yard, is exhibited. It has been under traffic in Smithfield Market for fifteen years. Its constituents are one part Portland cement to three parts blue whinstone screenings.

It is hoped these notes will lead to more attention being paid to materials such as those exhibited in the Irish section. With this object in view, the writer has regarded the subject from the point of view of the municipal engineer only, and has not considered it necessary to enter into the purely geological aspect of the question.

## CLASSIC DETAILS AND THEIR APPLICATION.

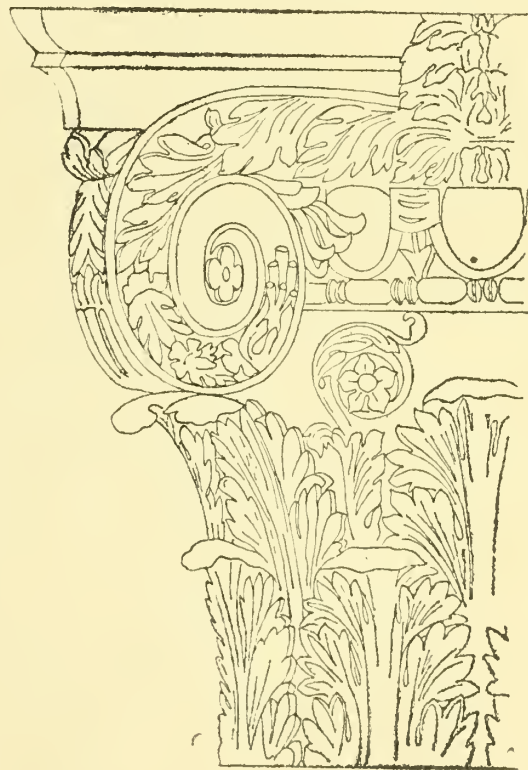
By G. A. T. MIDDLETON, A.R.I.B.A., M.S.A.

Author of *House Drainage, Surveying and Surveying Instruments, &c.*

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### III.—CLASSIC TIMES: THE CORINTHIAN ORDER.

Although the Corinthian Order differs from the Ionic in little else than the capital, its origin is apparently distinct, and can be much more readily traced. In the cases in the Kouyunjik Galleries in the British Museum there are several carved ivory ornaments of distinctly proto-Corinthian type,

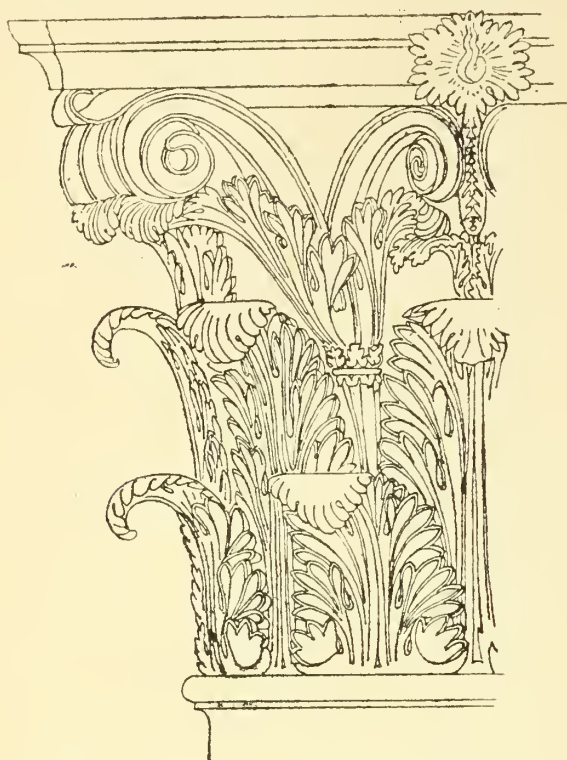


HALF OF COMPOSITE CAPITAL, ARCH OF TITUS, ROME.  
FROM TAYLOR AND CRESY.

brought from Assyria by Sir Henry Layard, and which may be approximately ascribed to 800 B.C.; but further back than this there is the simple palm-leaf capital of Egypt, of which an example in the British Museum is ascribed to the time of Rameses II., or about 1333 B.C., and earlier than this again is the bell-capital, with the palm-leaf painted on it, which can be traced to the earliest Theban times, or, at any rate, to the erection of the palace at Luxor, about 1500 B.C. These, however, must not be confounded with the capitals of distinctly Corinthian type, which are found at Philæ and in most of the other buildings of Ptolemaic Egypt, for the first Ptolemy having been a general under Alexander the

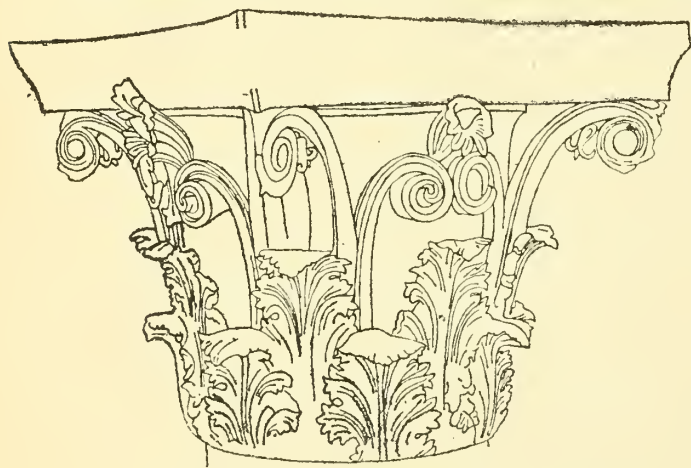
Great, his date, and that of his successors, is long subsequent to the building epoch in Greece.

So far as one can judge from the examples left to us, the order seems to have been employed by the Greeks entirely in a subsidiary sense ; for we may put aside consideration of



HALF-CAPITAL OF THE PORTICO OF THE  
PANTHEON, ROME.  
From TAYLOR and CRESY.

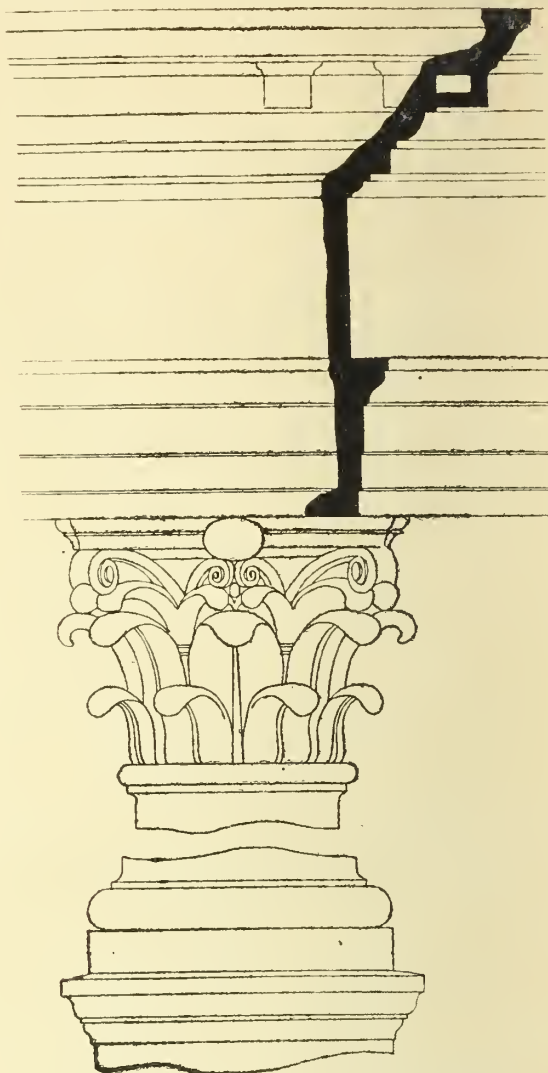
the huge Temple of Jupiter Olympus at Athens, the date of which is very uncertain, while most authorities consider it to have been essentially, if not entirely, Roman. Thus, at the Tholos at Epidauros, where is the earliest known example, ascribed generally to the time of Pisistratus, or about 560 B.C., the Corinthian Order is confined to the inner peristyle, the exterior being Doric ; while in the Temple of Apollo Epicurius at Bassæ, at Phigaleia, built by Ictinus



CORINTHIAN CAPITAL FROM THE THOLOS AT  
EPIDAUROS.

From a Photograph by Mr. R. E. SMITH, published in the R.I.B.A. *Transactions*, about 430 B.C., there is only one Corinthian column, the internal order being Ionic, and the external Doric ; and at the Temple of Diana, at Ephesus, there could have been but few, though the exact number is controverted, and, strangely enough, the example in the British Museum is elliptical on plan, instead of being circular. As to the two better-known and later examples, those of the Choragic Monument of Lysicrates and of the Tower of the Winds, both at Athens, the buildings to which they are applied are themselves but small works, little gems upon which great elaboration of detail might be indulged.

Just as with the Doric and the Ionic, so the Corinthian capital, when it first appears in Greece, is already fully formed. Early as is the work at Epidauros, the capital from thence is as beautiful and as perfect in conception and in execution as are any of the later examples. The fern-leaf of Egypt has given place to the sharply-defined acanthus, with long-drawn, simple lines, deep under-cutting, and absolute precision of workmanship so characteristic of Grecian work, and so unapproached by that of any other people before or since ; and, it may be said, so impossible



CORINTHIAN ORDER OF THE COLOSSEUM.  
From TAYLOR and CRESY.

of attainment in any other material than the finest marble. So, too, we find the tendril volute and the lily-bud, springing out from the bell of the capital which they are there to adorn, having no constructional function whatever to perform.

The capital at Ephesus was essentially similar to that at Epidauros in the arrangement of the acanthus leaves, the volutes, and the caulicolæ (or smaller tendrils), and this in spite of the difference of place already mentioned ; but in the Choragic Monument of Lysicrates there are several noticeable variations. In place of the lowest range of acanthus leaves there is a band of vertically-rising water leaves of the most severe and simple form, and the acanthus leaves of the upper tier are crowded together, each alternate one standing out in front of its two neighbours, and the junction being hidden by pateræ ; while the lily of Epidauros is replaced by the anthemion.

As to the capital at the Tower of the Winds, it scarcely deserves to be called Corinthian at all, for it varies so greatly from other examples. The volutes are here absent altogether, the ornamentation consisting only of a tier of acanthus, surmounted by a tier of water leaves ; but, as in all other examples, the design and execution are superb.

With its adoption by the Romans a complete change came over the Corinthian Order ; and, in fact, few things show more markedly the contrast between the peoples of Greece and Rome than does the treatment of the orders. The Doric, loved by the Greeks, was too subtle and severe for Roman taste, which was, however, suited admirably by the elaborate Corinthian. Hitherto treated as a very choice bit of detail to be introduced with care and restraint and kept subordinate to a severer whole, it was now adopted with enthusiasm, and made to do duty everywhere, whether intrinsically suited to its position or not. It was subordinate now only in the sense of being used as the topmost of the three Orders when they were superimposed ; but most of the greater works, whether temples, baths, or triumphal arches, were of the Corinthian order alone, either in its pure form or in its variant, the Composite.

Used thus largely in great buildings and in small alike, plenty or complete examples exist, the proportions of which can be determined ; and it will be seen by the following tables that, governed by the greater height of the capital, a greater proportional height of column to its diameter was necessitated than with either of the other Orders while the taper was less :—

Examples.	Diameters in Height.	Entablature in Terms of Diam.	Inter-Columniation.	Height of Capital in Terms of Diam.	Upper Diam. in Terms of Lower Diam.
Corinthian.					
Pantheon portico ...	9·804	2·217	2·092	1·175	·855
Jupiter Tonans .....	10·241	2·069	1·588	1·167	·867
Jupiter Stator .....	9·820	2·536	1·575	1·08	·891
Arch of Constantine	9·661	2·388		1·095	·882
Composite.					
Arch of Titus .....	10·662	2·533	—	1·287	·887
Arch of Septimus Severus .....	8·260	2·316	—	1·144	·882

The three examples illustrated herewith may be considered to be fairly typical, though great liberties were often taken with the design, especially in later times, figures of animals (the horse, for instance, in the Temple of Mars Ultor) and natural foliage being occasionally introduced. Good workmanship was still the rule, but the simple lines of Grecian work were replaced by more voluptuous curves, and a greater multiplicity of members. The acanthus suffers in particular, its sharply-defined points and arrises being replaced by a form of leaf which is of a rounded character, and which is not always guiltless of a surface-wave, such as a line drawing in elevation can scarcely show.

Owing to their great height from the ground, it was evidently right to leave the Corinthian capitals of the Colosseum with quite plain water-leaves, or merely outline suggestions of the acanthus, and similarly it was right to give greater detail to the capitals of the Pantheon portico, in which instance, it may be remarked, the columns were left unfluted, and the richly carved capitals gained greatly in value and appropriateness in consequence.

Another point to which attention may be drawn is the fact of the ornamentation being designed by the Romans for weight-carrying, the angle volutes being strong in form and supported by the acanthus foliage underneath ; and it seems to have been the desire to obtain greater strength which prompted the combination of the Ionic and Corinthian capitals in the Composite. Strangely enough, though, in the earliest known example of the Composite capital, that of the Arch of Titus, it was employed as an applied order only, with no constructional value, the opening being spanned by an arch !

Clumsy in its very conception, and possessed of no intrinsic beauty of line, this form of capital depended

largely for its effect upon the wealth of surface-carving with which it was enriched, and which was itself of a character which compares very unfavourably indeed with the clear-cut and entirely conventional forms of Greece. Never used very largely, even by the Romans, and never developed to any high degree of excellence, the Composite capital may now be regarded as rather an archaeological curiosity than as a form to be largely used, the opportunities for its correct application being extremely rare.

To be continued.

## BUILDING NEWS.

**Aghada.**—A new Presbyterian Church has been put up at Aghada, near Cork, the site occupying about half an acre. The building is of iron, lined with wood and felt, and the contractors were Messrs. W. M'Bride and Sons, Cork.

**Annalong.**—A new tower is being added to Annalong Parish Church, the main building having been erected about the year 1840, and since that time it has undergone various alterations and improvements.

**Arklow.**—The new church of St. Saviour's, Arklow, has just been opened, from the designs of the distinguished architect Sir Arthur Blomfield, A.R.A. It was built by Lord Carysfort, at his sole expense, and has cost many thousands of pounds. The contractors were Messrs. John Thompson and Son, of Peterborough. We will publish a more detailed account later on.

**Armagh.**—An appeal has been issued by Cardinal Logue, Archbishop of Armagh, with respect to the completion of St. Patrick's Cathedral there. Through the munificence of individuals, all the windows, except nine, have been filled with stained glass at considerable expense, one lady having expended over £700 on a large transept window. But these have done little more than clear the way for the real work of completion. Altars, pulpit, flooring, heating, vaulting aisles, interior decoration, and the many other details necessary to finish the church, would require a sum which the people of the archdiocese could hardly hope to raise within a reasonable time. Hence the need of appealing for aid outside the archdiocese, and it has been decided that a bazaar for the purpose of raising funds to complete the Cathedral should be opened on the 15th July, 1900.

**Athlone.**—Mr. W. Smith, J.P., managing director of the Athlone Woollen Mills, has made an offer to contribute £1,000 for the purpose of erecting artisans' dwellings and technical schools in Athlone, provided the Urban Council would adopt means to raise a like sum for a similar purpose.

**Ballinasloe.**—A movement is on foot to restore the Ballinasloe Church of St. John's, in the Diocese of Clonfert, which was destroyed by fire on 11th May. The work is expected to cost £5,000.

**Ballybriest.**—A new Orange Hall has been put up at Ballybriest, Co. Londonderry.

**Ballybunion.**—It is contemplated to erect Hot Salt Water and Shower Baths at Ballybunion, Co. Kerry, at a cost of about £600. The estimate and plans in connection with the project have been prepared, and a site will be shortly selected. Mr. Wm. Shortis is hon. secretary to the scheme.

**Ballycotton.**—The new church at Ballycotton is rapidly progressing, and its solid and beautiful character can now be seen.

**Ballymacwilliam.**—Tenders have been lodged for the building of a Dwelling-house at Ballymacwilliam, near Clonakilty, for T. J. R. Lucas, Esq., J.P. The architects are Messrs. W. H. Hill and Son, 28 South Mall, Cork.

**Belfast.**—The foundation stone of the new Protestant Cathedral for Belfast will be laid on Wednesday, the 6th inst., by the Countess of Shaftesbury. The architect is Mr. Thomas Drew, R.H.A., of Dublin, and the contract for the first section of the work has been taken by Messrs Laverty and Sons, of Belfast. Canon O'Hara only announces subscriptions and donations to the amount of £16,000. £100,000 has been raised for the Royal Victoria Hospital, and nearly a like sum to endow it; also, £18,000 for the Y.M.C.A. building.

The Albert Hall has been erected on the Shankill Road, as well as several Methodist and Presbyterian churches over the city.

A new Masonic Hall is about to be erected at Ballymacarret, a populous district of Belfast.

The handsome new Malone Presbyterian Church now replaces the old structure. The architects were Messrs. Young and Mackenzie.

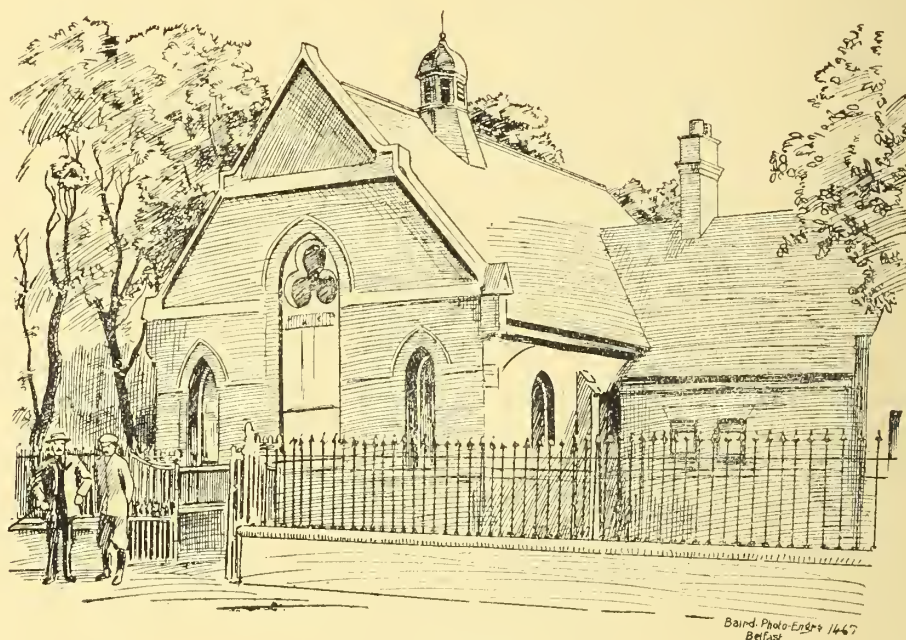
**Birr.**—The Government has decided to erect a Crown Office in this town. A most suitable central site in Cumberland Square has been selected. The cost of the new edifice, which will be a handsome structure of red brick, is estimated at £5,000.

each side. The building, altar, etc., have been designed and superintended by Mr. Samuel F. Hynes, F.R.I.B.A., Architect, 41 South Mall, Cork. The works have been carefully carried out by the builders, Messrs. E. and P. O'Flynn, Watercourse Road, Cork. The altar, rails, and carving, have been carefully executed by Mr. John F. Davis, College Road; the rich roof decorations by Mr. John O'Connell and Son, Decorator, North Main Street; the electric lighting by the firm of Handley and Shanks; and the handsome tiling by Mr. Nicholas Sisk—all of Cork. The entire works reflect great credit on all concerned.

**Curragh.**—Under the Military Bill, 1899, £50,000, is set down for the reconstruction of a portion of the camp. There are, however, other huge works in contemplation, as well as those already in hand.

A civil building, called the Alexandra Nurses' Home, was started a fortnight ago, the cost been estimated at £1,000. Mr. R. Randall, F.S.I., of Palmerston Park, Dublin, is the architect, and the builder is Mr. Patrick Sheridan, of Sutton, near Dublin.

**Donaghadee.**—A new Masonic Hall has just been opened at Donaghadee, Co. Down. It is Gothic in style and the Architect is Mr. William Curragh.



MASONIC HALL, DONAGHADEE.

**Clones.**—The Board of works are considering the site for the new Post Office, and the matter will be pressed forward as expeditiously as possible.

**Cork.**—A scheme is being formulated to obtain an auxiliary Lunatic Asylum, for harmless lunatics at present confined in the various workhouses of the county. A joint Committee has recommended the taking over of Youghal Industrial School for this purpose.

Tenders were recently called for the erection of a Dispensary Residence in the Townland of Gurraneboy, near White's Cross, for the Cork Union. The architect is Mr. D. J. Coakley.

St. Joseph's Oratory, South Infirmary, was recently opened by the Lord Bishop of Cork. The new chapel is 60 feet long x 27 feet wide, in the 13th century style of architecture, the eastern end being in the form of a semi-octagonal apse. The altar rail, steps, etc., are of Sicilian marble, and the ceiling has been handsomely decorated in colour. The series of windows have been filled with beautiful stained glass by the London firm of Westlake. The building will be heated by a powerful slow combustion stove, requiring very little attention, supplied by Musgrave and Co. of Belfast. The lighting will be electric, graceful wall electroliers projecting from piers between windows at

**Dublin.**—The Local Government Board have approved of the proposal of the Dublin Artisans' Dwellings' Committee to expend the £33,000 loan already granted on the amended building scheme in the Brides' alley area pending the sanction of the Treasury to the additional loans required to carry the scheme to completion.

A Fever Hospital will shortly be built by the North and South Union Boards of Guardians, but there is a difficulty in the selection of a site.

The Technical Education Committee have adopted a report on the acquisition of a suitable site on the north side of the city for a new Technical School.

Guinness' Brewery extension has progressed favourably during the year, on which £80,000 will be spent. Mr. S. Geoghegan is head architect of Guinness' architectural staff at St. James' Gate, Dublin.

**Drumgoland.**—The Parish Church has been renovated, and a two-manual organ and organ chamber added. The inside of the church has been coloured and decorated in good taste.

**Drumlough.**—Tenders were recently received for stone-finishing the Manse, and re-roofing the Church at Drumlough, Hillsborough, for the Rev. Thomas Bill.

**Dundalk.**—Two houses are about to be built for Mrs. H. Duffy, and one for Mr. U. Marron, in Vincent Avenue.

**Ennis.**—At a special meeting of the Ennis Urban Council, it was decided to apply for a loan of £4,000 to the Board of Works, for the erection of labourers' dwellings.

**Enniskillen.**—The Duke of Norfolk, Postmaster-General, has written to Mr. J. Jordan, M.P., stating that he is much pleased with the design for the Post Office at Enniskillen, and considers it "far superior to many of our Post Offices." The building will be constructed in the Georgian style of red brick, with a considerable amount of moulded stone work, consisting of two cornices and an entrance doorway. The ironwork will be rather elaborate, while the handsome gates leading to the yard will be good specimens of the style.

**Kiltarnan.**—The Parish Church of Kiltarnan, Co. Dublin has received many handsome additions and improvements, including a reredos, chancel rail, baptismal font, and pews.

**Limerick.**—Premises have been secured to start a Soldiers' Home in Limerick, and it is proposed to have hot and cold baths, and good sanitary appliances. The work is estimated at £1,500.

The Board of Guardians intend to spend about £5,000 in the reconstruction of the laundry, cooking appliances, and drying chamber.

## LAW CASES.

**Breach of Agreement.**—The Dublin Recorder heard an action taken by Patrick Fee, of 94 North Strand, contractor, against Thomas Roche, of 41 Lower Dorset street, for £20 damages for breach of agreement.

Mr. Alfred Coffey appeared for plaintiff, Mr. Gerald Byrne appeared for defendant.

The plaintiff said that he entered into an agreement with the defendant to prepare quantities and an estimate for Nos. 11 and 12 North Earl street, on the distinct arrangement that if the defendant obtained the contract the plaintiff was to leave his then employer and take charge of the works at Earl street as a working partner, and that the plaintiff was to receive £2 per week and defendant £3 per week whilst the work was going on, and when the contract was finished the profits were to be equally divided. When the contract was finished defendant refused to pay plaintiff his share of the profits. The plaintiff and defendant having been examined, the Recorder made a decree for £5 5s., in addition to the moneys already paid by the defendant to plaintiff, with costs.

**Quantity Surveyors' Fees, Cork.**—This was an action brought by the firm of Messrs. Norcroft, Neighbour and Co., London, against Messrs. John Delaney and Co., Cork, for £169 15s., in respect of survey quantities which they took out in connection with the repairs of the Victoria Hotel, Cork.

Mr. Connor, Q.C., in stating the case, said that most of the questions arising on it had been discussed and practically disposed of by the jury in their verdict in the case *Brunton v. Connell and Daly*. The plaintiffs were a very large firm of quantity surveyors, having an office in London, and engaged at the present moment on quantities for contracts amounting to ten millions. On the 27th January, 1897, the plaintiffs were employed to take out the quantities for the proposed alterations on the ground floor of the Victoria Hotel. The plaintiffs prepared those quantities, and invited tenders. The defendants, Delaney and Co., priced the bills of quantities, and included in the estimate the sum due for £169 11s. 6d. in respect of the plaintiff's fees. Subsequently the work was not carried out in accordance with the plans and specifications, and the architect, Mr. Brunton, added the amount sued for as

surveyor's fees to his first certificate. The defendants, Delaney and Co., presented the certificate for payment to Mr. O'Connell, who alleged that he agreed with the plaintiffs to pay only for the amount of work carried out by the builder. Plaintiff repudiated any such agreement, and brought their action for the amount mentioned. The only defence relied on was the lodgment of £4 4s. 9d. in court, that sum representing the amount to which the plaintiffs would be entitled on the work done.

Mr. Wm. F. Neighbour, member of the plaintiff's firm, was examined by Mr. Connor, Q.C. He stated that his firm did a very considerable business as surveyors in England. He remembered an interview in Mr. Brunton's office in London, between Mr. John O'Connell, Mr. J. B. O'Callaghan and witness, when Mr. Brunton got directions from Mr. O'Connell that plaintiff's firm should be employed to take out the quantities for the Victoria Hotel, and after that witness went to work. He knew Mr. O'Connell in connection with the Palace Theatre. Witness took out the quantities, and the draft bills were checked by himself. This took witness a couple of months.

To his Lordship—Working exclusively, witness and his assistant could do the work in a fortnight.

Further examined—He had to get 13 or 14 lithographed copies of the bills of quantities, and he was informed that Messrs. Delaney got the contract. He applied to Messrs. Delaney for the amount some time in January of the present year. A letter was received on the 11th February, '99, from Messrs. Delaney stating that they would be happy to give any fees handed over to them by Mr. O'Connell. Witness's charges, £169 15s., were perfectly reasonable.

Cross-examined by Mr. Barry—He never had any communication with Messrs. Delaney until he applied for payment in January, '99. In connection with the Palace Theatre he doubted whether he was paid for his bill of quantities by the directors or the contractor. He could not recollect, but it may have been the directors. He went through the quantities in the present case piece by piece as was usual. He only took measurements where necessary. The usual charge was 2½ per cent., but he charged only 1 per cent. on large works. The 2½ per cent. in the present case was fixed by witness. The item for £27 in the bill was for printing. He did not know what the incidental items mentioned in the bill were. He could not give the particulars at all.

This closed the plaintiffs case, and

Mr. Barry asked for a direction on the ground that there was no contract.

His Lordship said he would hear the evidence for the defence, and he would then consider the matter.

Mr. John Delaney was then examined by Mr. Harley, and stated that on this particular job quantities were not necessary at all. He pointed out several items in the quantities that were not necessary while others were only provisional. Plaintiffs would be entitled to 1½ per cent. Witness did work to the amount of £337 19s. Witness did not receive one penny of the £169 15s. for surveyor's bill of quantities. Witness handed Mr. O'Connell the certificate, but he refused to pay it.

Cross-examined by Mr. Connor—The plaintiffs were to be paid through witness, but he did not consider himself liable for the fees as the amount was put at the foot of the tender for the convenience of the building owner, and that amount was generally included in the first certificates. He disputed that he should pay the amount out of his own pocket.

Mr. James F. M'Muilan, C.E., considered 1½ per cent. a fair remuneration in a case even where an inspection took place. £10 for printing would be sufficient in the present case. Except in certain cases provisional details should not be introduced into the quantities.

This closed the evidence, and counsel on both sides having agreed not to address the jury,

His Lordship briefly summed up, and left the following questions to the jury:—(1) What is due to the plaintiffs for the entire of the work and labour done by them as quantity surveyors. (2) Assuming the plaintiffs are entitled to be paid, what per centage should be allowed.

The jury found for the plaintiff in the sum of £103 1s. 3d., but on a question of law, which was argued at length, his lordship said that the case was so complicated and capable of argument that he would not enter a verdict for either party, and he would leave it for them to move for judgment until the first day of the next sitting in Dublin.

This concluded the business.

## CORRESPONDENCE.

### Turf Walls.

*To the Editor of the Irish Builder.*

SIR,—It may surprise you to learn that such things exist in this country as partition walls built of pieces of turf, laid in mortar like bricks, and plastered over. I discovered this fact while living for a short time in a cottage away west, when a piece of plaster fell off the wall and exposed the wretched work. Houses in Limerick are built with this flimsy construction, and on relating my experience to a friend, he told me that during some alterations at No. 2 Merrion Square, Dublin, he found out the same thing. This house was built 130 years ago, and is considered quite a swagger one. Surely it is only in ould Ireland that such jerry building is possible, where we have mud cabins galore, whitewashed inside and out to cover the sins of our forefathers. Perhaps some of your other readers may have a similar queer story to tell?

CLERK OF WORKS.

### Lord Kelvin's Brother.

*To the Editor of the Irish Builder.*

SIR,—With reference to the paragraph in your issue of 1st August, stating that Lord Kelvin is an Irishman, having been born in Belfast in 1824, it may interest your readers to know that his brother, James Thomson, commenced the profession of engineering in the same city in 1851. He got the credit, when in Belfast, of being the cleverer of the two brothers, although William afterwards rose to higher eminence. James patented a vortex water-wheel, an improvement on the ordinary turbine, which was supplied by water from the town supply. He was appointed Professor of Civil Engineering in the Queen's College in 1857, and resigned in 1873, when he was offered a similar chair in Glasgow University. He died in 1892.—I am, etc.

A BELFAST ENGINEER.

Mr. James Heron, B.A., B.E., A.M.I.C.E., has been appointed county surveyor of Co. Down at a salary of £800 a year, to devote his entire time to the business of the Council. He is a son of Professor Heron, of the Assembly's College, Belfast, and passed the Civil Service examination for Irish County Surveyorships in 1891, being then appointed to Co. Monaghan. There were eleven applications from acting county surveyors, and seventeen from other candidates. We congratulate Co. Down on its excellent choice.

Morrison's Hotel, at the corner of Nassau-street, Dublin, which is now in the market for sale, is a hostelry full of historic associations. It was formerly one of the town residences of the Dukes of Leinster, and the arms of the Fitzgeralds are placed immediately over the principal entrance. It was in Morrison's Hotel that the duel between Daniel O'Connell and D'Esterre—which terminated fatally for D'Esterre, and cast a cloud over O'Connell's life—was arranged; while in later times Morrison's Hotel was the scene of the arrest of Mr. Parnell on October 13, 1881, as a "suspect" under the Crimes Act. The Irish leader was apprehended in bed early in the morning and immediately conveyed to Kilmainham.

## SCOTTISH PROVIDENT INSTITUTION OFFICES, BELFAST.

When the Directors of the Scottish Provident Institution resolved to erect their Insurance Offices in Belfast, they secured the conspicuous site at the corner of Wellington Place and Donegall Square, West, where the town residence stood of William Thompson, father of the well-known author of "The National History of Ireland," and of Mr. James Thompson, J.P., Macedon. The available frontage towards Donegall Square exceeds 230 feet, of which the present building occupies 90 feet. It will form one wing ultimately of the completed block, which is designed with a central projection terminating in a lofty dome. The side wings will balance each other, and harmonise architecturally with the centre. It is expected that the whole building will form one of the most impressive piles in the city on account of its stately proportions, imposing mass, and picturesque cupolas and dome.

The style of architecture adopted is Italian, so modified as to suit this climate, and the special requirements of the building as regards height, etc. A projecting columnar porch, two stories in height, placed on the angle, forms a conspicuous entrance to the Insurance Office. Over the doorway stands an elaborately carved group in Carrara marble, modelled life-size, from the beautiful seal of the Scottish Provident Institution. Adjacent, but on the Wellington Place side, is the commodious approach to the stone staircase and electric lift, which afford access to the extensive suites of offices on the first, second, third, and fourth floors. All of these are fireproof, as indeed is the whole building, and above them is a spacious floor, with convenient caretaker's apartments, and numerous storerooms let in connection with the shops and offices.

In addition to their own Insurance Offices on the ground floor, which extend along Donegall street, there are two fine shops occupied respectively by Messrs. McGee and Co., and Mr. W. E. Payne. The Wellington Place frontage contains shops let respectively to Messrs. Leahy and Kelly, Cheyne, and Lizars, and a large set of offices occupied by Messrs. Martin Shaw and Leslie, C.A. All these shops have ceilings about twenty feet high, carried on metal standards faced with Scandinavian red granite finely polished. Emphasis is given to the Insurance Offices by a special treatment of the masonry, which is in alternate courses of rusticated and fluted stone. The windows have boldly projecting pilasters, carrying heavily moulded arches. The latter support a deep frieze, carved with fruit and flowers carried by Cupids, flanking each keystone. The latter are carved with specially modelled female heads representing British possessions in the four quarters of the globe, as follows: England (Europe), India (Asia), Canada (America), and Soudan negress (Africa). Above the Insurance entrance is a beautiful carved head of a Highland girl representing Scotia, with the national bonnet, on which is pinned by a Celtic brooch a thistle. It is carved in solid Carrara marble. On the Wellington Place front is a head of Erin with the national shamrock, whilst a richly embossed shield bearing the Lion of Scotland forms a conspicuous feature over the doorway to the general offices. For the purpose of breaking the monotony of the numerous windows necessary to light the various office floors, an order of Corinthian attached columns is introduced at the level of the cornice above second floor. Placed on panelled pedestals carved with lions' heads and drapery, the order rises 34 feet in height to the elaborately carved capitals connected by festoons resting on life-size female heads. Above them projects a deep frieze and cornice, with a moulded eave spout of wrought copper bearing lions' heads in full relief at intervals. An open balustrade carried along both fronts is flanked by a series of panelled dies and blockings, with terminals 90 feet above the footpath.

An electric clock, upwards of six feet in diameter, occupies the angle or building at this level, and is surmounted by a moulded pediment with acroterion. The cupola above is octagonal on plan, and has pilasters at each angle with scrolls. It is crowned by a graceful dome of ornamental copper, terminated by a gilt ball three feet in diameter, on which stands a copper figure of Mercury at a height of 140 feet. A feature is made of the upper portion of porch which has two American eagles of wrought copper, indicating the U. S. Consulate. Below are carved the arms of Edinburgh and Belfast. The outer walls are above four feet thick, faced with Giffnock sandstone from Messrs. Baird and Stevenson's quarries, Glasgow. A system of steel and concrete construction has been carried out as far as possible throughout the building. All the lavatories, etc., are separated from the offices by tiled passages, amply ventilated by numerous windows. The fittings of the offices of the Scottish Provident Institution have been specially designed by the architects for execution in teak wood. The general joinery is principally in yellow and pitch pine, varnished. A unique feature as far as regards Belfast is the liberal use of polished marbles in the inner porch and public office. The marbles employed are Sicilian, Dove, Pavonazetto, Genoa green, and black and gold from Italy, with St. Ann's and Rouge Fleury from Belgium. The outer archway is panelled with Dove, enriched with Genoa green marble pilasters which carry a massive splayed arch of Sicilian marble resting on richly carved caps. Solid Dove marble is used for the jambs overhead of the inner door, above which are panels of rich Pavonazetto marble. The walls have a base of St. Ann's dado of Genoa green, and capping of black and gold, above which are alternate slabs of Rouge Fleury and Sicilian marble. The outer floors are laid in Roman mosaic of special design, in which appear the rose, shamrock, and thistle interwoven. A fine mantle piece of Numidian marble is placed in the local secretary's office. The floors of inner offices are of oak and pitch pine polished. Painted glass in lead lights is introduced in the screens separating the three offices from the corridor. A strong room is placed adjacent to the offices, also an upper fireproof store room, lavatories, etc. An electric clock by Messrs Sharman D Neil and Co. will form an attractive feature in the outer office as it works in connection with the turret clock. All the numerous strong rooms have fire-proof doors supplied by Messrs. Milner and Co., and Messrs. Chubb.

The marble mosaic, terrazzo, and wood-block flooring throughout the building have been supplied by Mr. J. F. Elner through his agent, Mr. Shaw. Messrs. W. D. Henderson and Son have executed the wall tiling. The marble work and the carving have been carried out by Messrs Purdy and Millard. The electric fittings and the lift have been supplied by Messrs. W. T. Coates and Son. Mr. J. Dowling and Son have done all the plumbing and the copper flats. Messrs. Ewart and Son, London, have executed the ornamental copper work on Cupola, etc. Messrs. Ward and Partners, and Messrs Riddell supplied the chimney pieces of wood and marble. Messrs. Richard Patterson and Co. and Robert Patterson and Son supplied the hardware. All the offices and shops are heated and ventilated on the 'plenum' system by Messrs. Musgrave and Co. The general contractor was Mr. Robert Corry, who has executed the contract in a highly satisfactory manner. The architects are Messrs. Young and Mackenzie.

The death is announced of Mr. Thomas B. Palmer, C.E., assistant engineer in the large sewerage scheme which is being carried out in Waterford at a cost of £20,000. He was formerly employed in the extension work of the Dublin, Wicklow and Wexford Railway, and was much esteemed by all classes.

The Rev. Father Jarlath Prendergast, of the Franciscan Monastery, Killarney, has in preparation a series of articles on old Kerry churches and ruins for the *Cork Archaeological Journal*, and his great erudition and literary skill will enable him to do justice to the subject.

## OUR LONDON LETTER.

The question of electric traction for the tramways has for some time being occupying the attention of the Highways Committee of the London County Council, who deputed Professor Kennedy, F.R.S., to report as to the best system for adoption, with the result that two schemes are discussed as being possible; the underground or conduit system and the overhead wire system. The latter would be out of the question in the crowded streets of London though very suitable for the broader thoroughfares and quieter roads of the suburbs, while the former, though very extensively and successfully in America and the Continent, is open to several objections as applied to London—one being the difficulty and cost of constructing the conduit where the roads are so intersected with pipes and wires of all kinds, some of them very near the surface as in the case in many London streets, and another the necessity of constantly cleansing the conduit of accumulations of dirt and rubbish at a considerable cost per mile.

The conduit system is recommended for adoption, and it would appear to be not a very difficult matter to arrange for a change of system at different points if found advisable, so that the same car could be used on each line and the change effected without any material stoppage.

The early days of October will witness the opening in Manchester of the splendid building erected by Mrs. Rylands to perpetuate the memory of her husband, John Rylands, and which will be a standing reminder of his lifelong connection with that town. Designed by Mr. Basil Champneys, no expense or trouble has been spared to adapt the edifice for the purpose to which it is to be put, viz., that of housing the most magnificent collection of literary treasures in the world.

Ten years ago the nucleus of the library was formed, and later Mrs. Rylands purchased for an enormous sum from Earl Spencer the Althorp Library, which contains among other items, 51 genuine Caxtons, the 36-line or Pfister Bible, and the 42-line or great Marzarine Bible, and a copy of every book, with one exception, mentioned by the first Italian printers in their catalogue of 1472; there are also some 2,000 early printed books mostly prior to 1840.

Altogether some 70,000 volumes have been collected, and it is hardly necessary to say that the library is not in any way a lending one.

The library also contains some unique specimens of binding, a large number being by Roger Payne, the finest binder England has produced.

The death is announced of Sir Edward Franklin, late Consul-General for Norway, where he died; born at Churchtown, near Lancaster, in 1825, he was formerly one of the professors at Owen's College, Manchester, afterwards holding appointments at St. Bartholmew's Hospital, the Royal Institution, and the Royal School of Mines, and for thirty years he reported annually to the Local Government Board on the condition of the London Water Supply. He was also the author of many important works on chemical science and water analysis, and was President of the Chemical Society, connected with other scientific bodies, and held honorary degrees from three Universities. He was made a K.C.B. in 1897.

Boston, "The Hub of the Universe," is generally admitted to be a well governed city, and should presently rank architecturally as one of the most beautiful, if, as is stated, the authorities allow no old building to come down without good and sufficient reason, and also exercise a rigid oversight as to the architectural designs of new buildings.

In England it is the exception for the local authorities to pay any attention whatever to the design of a building apart

from the plan, and consequently our streets present the most incongruous admixture of architectural designs, though in Scotland things are rather better owing to the existence of the Dean of Guild Court, which, while exercising authority over the plans, impresses upon the builder the desirability of an elevation suitable to the position and purpose of the building.

It must be acknowledged that the United States are greatly ahead of this country in the speed with which they can turn out locomotives, consequently they secure orders for work which one would naturally suppose might give employment to English firms. The fact is the Americans while using the very best material and workmanship, do not give so much time to the superfine finishing of the parts and which is a characteristic of the English made engine; where we finish up with a lathe, and in some cases by hand, the Americans paint the parts, consequently an enormous amount of time and labour is saved while not detracting in any way from the practical utility of the machine. An example of the way in which the Americans secure English orders is found in the fact that when the British Government had trouble in Egypt two years ago, it wanted four locomotives at once; no English firm could do the work in less than four months, the Americans contracted to do it in sixty days, and on the Government offering a bonus of \$100 per day for finishing in shorter time the order was executed in thirty-one days; other orders followed, and during the last six months sixty engines of various types have been made and sent over here. Some of the American works can turn out as many as twenty-three locomotives per week; and though the strike last year handicapped the English makers it would appear that under the most favourable conditions they cannot successfully compete with the United States in quick delivery, and it pays them to place their orders outside the country.

Kew Bridge, which was opened for traffic in 1789, was even then inadequate for the traffic, and matters have been getting more acute lately, culminating in a special Act of Parliament for the erection of a new bridge which will cost nearly a quarter of a million, and the old bridge will soon be a thing of the past. The new structure is to be of granite in three spans, and will take as many years to complete. Sir John Wolfe Barry revised the plans, and the tender of Mr. Easton Gibbs, of Stockton, has been accepted at £149,085. To this has to be added a further contract with Mr. Gibbs for £24,000 for an increase of ten feet in width, while land purchase and commission absorb another £20,000.

The poor we have always with us and their re-housing on the demolition of insanitary areas is a problem which will tax the resources of the London County Council to their utmost limit. This is particularly the case with the proposed rebuilding of the condemned slum property in the vicinity of Clare Market, which improvement is greatly delayed owing to the difficulty of the dwellers in these parts finding other quarters; most of the tenants have received the usual twenty-one days' notice to quit, and although everything possible is being done to re-house them very few have secured fresh rooms, and in the event of these not having done so by the time the notices expire, matters are likely to assume a serious aspect, and with further improvement schemes in view the problem promises to become still more acute.

The very latest in street-cleaning stories comes from Chicago, where it is said an elephant acts as scavenger, the beast in question being a "property" animal of street constructions and regulated by a driver from an elaborate howdah on its back. By means of its flexible trunk and steel

bands augmented by bellows in its head, the quadruped is made to collect the refuse, etc., and swallow it, and the work is said to be done quietly and expeditiously. The next thing will be an automatic ostrich for collecting scrap iron, and presently the ordinary managerie and circus procession will cease to attract any attention in consequence of the daily performances of the Corporation automatons.

On the invitation of the Mayor and Corporation of Lincoln, the Sanitary Inspectors Association have just held the annual conference in that town extending over three days. The President of the Association, Sir John Hutton, was prevented by ill-health from attending. There was an official reception in the Guildhall, and a presidential address from Mr. T. J. Moss Flower, C.E., followed by an extraordinary general meeting.

A Health Exhibition was one of the attractions, and during the Conference various papers were read.

Reference has already been made in these columns to the attitude of the Treasury Department towards the Trustees of the National Gallery in view of the proposed purchase of Wilkie's portrait of the Queen, and which could not be entertained owing to want of funds, but it is satisfactory to learn that her Majesty has herself presented to the Gallery the portrait of herself in her coronation robes, painted by Sir George Hayter, and at present in Kensington Palace.

In "The Construction News," the official organ of the Chicago architects' business association, reference is made to what is called the British Architects' Registration Bill, a very comprehensive instrument which covers in a general way the provisions of the License Law of Illinois though its jurisdiction is much broader. The important difference in the British Bill is that it is an Act "to provide for the registration of architects in order that persons requiring professional aid in architecture may be able to distinguish qualified from unqualified practitioners," whereas the Illinois Law provides for the "licensing of architects, and for regulating the practice of architecture as a profession."

## IRISH ART INDUSTRIES EXHIBITION.

The Exhibition of Art Industries held annually by the Royal Dublin Society during Horse Show week took place this year on August 22, 23, 24 and 25. The Art Industries Exhibition has been steadily growing since its inception in 1888, in which year the Society offered prizes and Medals to the value of £50 with the view of encouraging lace-making in Ireland. Since that date classes have been added for embroidery, wood-carving, metal work, leather work, pyrography, and designs; and the amount of money has, of course, also been largely increased. The progress of the exhibition is strikingly shown by the following table, taking periods of five years:—

Class.	Number of Entries.		
	1888.	1893.	1898.
Lace and Embroidery ... ..	38	189	288
Designs for Lace ... ..	—	114	189
Wood Carving ... ..	—	191	259
Artistic Metal Work ... ..	—	22	34
Artistic Leather Work ... ..	—	—	—
Pyrography ... ..	—	—	—
Total ... ..	38	516	812

The prizes this year are divided amongst the various section of the exhibition somewhat as follows:—

		Amount offered in Prizes.	
Lace and Embroidery ... ..	£75		
Designs for Lace and Embroidery ... ..	30		
Wood Carving ... ..	35		
Artistic Metal Work ... ..	35		
Leather Work and Pyrograph or Burnt Wood Work ... ..	10		

There were no fees payable for entering exhibits for any of the classes, and as an additional inducement to compete for the prizes, facilities were afforded for the sale of the articles exhibited, no commission being charged on such sales.

It will thus be seen that the Royal Dublin Society offers every encouragement for the development of Irish Art Industries.

## TRADE AND WAGES.

The usual standard rate of wages for painters in Cork is 33s. per week, but the painters at the Cork Workhouse Painting Contract are now getting 34s. per week.

We are glad to see that the Waterford Brick Factory is progressing well, and that another effort at the production of Irish material on home ground is yielding good results.

The dispute between the master builders of Londonderry and the local wood-workers, with reference to the claim of the latter for increased wages, has been settled amicably.

The half-yearly meeting of the City of Dublin Workmen's Club, Wellington Quay, was held on Monday, the 21st ult. The balance sheet shows £93 12s. 3d. to the credit of the Club in the Hibernian Bank. There is a total of 409 members.

The recent strike on the Letterkenny and Burton Park Railway Extension at Letterkenny has terminated. Employment was open all along to those who sought it. Hopes were entertained of increased wages, but the navvies were paid the former rate of 15s. per week.

A new trade union has been formed called the Irish Trade Union and National Co-operative Society, the first meeting of which was recently held in the Workmen's Club, 15 Upper Gloucester street, Dublin. There was a good attendance, and Mr. Thomas Foy took the chair.

An advertisement recently appeared in the Irish papers asking labourers to accept a free passage to Portland, to take up work there at 5d. to 5½d. per hour. About 2,000 labourers assembled at the North Wall, Dublin, but only 100 were accepted at the booking office. This gave rise to some excitement, and fifty police were present.

At the fortnightly meeting of the Dublin Trades Council held on 14th ult., Mr. Simmons called the attention of the Council to what he described as the wholesale importation of shop fronts into Dublin. A resolution was adopted condemning the practice, and stating that "the members of the community who foster the traders who encourage such importation are utterly unworthy of public support."

The late meeting of the Parliamentary Committee of the Irish Trade Congress, held in the Trades Hall, Capel street, Dublin, was well attended, delegates being present from Belfast, Limerick, Derry, and Dublin. In connection with the Workmen's Compensation Act there was a lengthened discussion. The recent legislation in connection with the Agriculture and Industries Bill was considered, with the result that a deputation was appointed to wait on the Chief Secretary and a number of Irish members of Parliament to have the Dublin, Belfast and Cork Trades Councils represented on the Industrial and Technical Education Board. The necessity for such a representation is obvious, and the three Councils should co-operate and press the matter until they succeed in gaining the desired object.

Mr. John Adair, Waterford, has been granted a patent for "Improved means for controlling the speed of steam-engines."

The Custom House, Dublin, on the grand dome of which the figure of Hope was struck by lightning in the recent thunder-storm, was built in 1790 by the Irish Parliament, and is, according to the *Westminster Gazette*, one of the most beautiful structures in Europe.

## QUESTIONS AND ANSWERS.

### Foundations.

Q.—Could you please tell me the names and publishers of a few good books on foundations, as the subject is treated in a very superficial manner in most books on building constructions?—Student (Cork).

A.—Some special works on this important branch are:—Dobson's *Foundations and Concrete Works*, an elementary book published by Crosby, Lockwood and Son, in their Weale's Series; Price 1s. 6d. There are two good American books, namely:—Patton's *Practical Treatise on Foundations* (John Wiley and Sons, New York; Price 21s.), and Powell's *Foundations and Foundation Walls* (William T. Comstock, New York; Price 10s. 6d.). Scraps of information may also be gleaned from other well-known text-books, such as Rivington's, Mitchell's, &c.

### Stable Construction.

Q.—I have to design a large mansion in connection with which are some stables. Where can I get some information on the most modern methods of stable construction?—E. T. E., Architect.

A.—Coleman's *Stable Sanitation* (E. and F. N. Spon, London), would be just the thing. For fittings you cannot do better than go to Messrs. Musgrave of Belfast, as they have done any amount of good work. Send for a catalogue.

## BREVITIES.

Mr. John Simmons has been elected Clerk of Works to the Dublin Technical Schools.

Members of the Belfast Mechanical Engineering Association recently visited Loop Bridge Works, which belong to Messrs. McCaw, Stevenson and Orr, Limited.

The "Irish Highlands" Hotels at Bundoran and Warrenpoint have been purchased by the Great Northern Company for the sum of £29,000, and the Mourne Hotel at Rostrevor is expected to be open early in the autumn.

The historic house in Ranelagh, Dublin, where Dr. Benson lived, and which he kept as the residence-house for the boarders of Rathmines School, has just been demolished. Piles of building materials now stand on the lawn, which presents a busy spectacle. Messrs. H. and J. Martin, the well-known big contractors, have taken the place, and a large number of small houses are to be erected on this eligible site.

A general meeting of the Royal Society of Antiquaries of Ireland was held in Belfast on the 16th ult., when papers were read on:—"Minutes of the Presbytery of Laggan, 1672-95," by Rev. W. T. Latimer; "The Cistercian Abbey, Grey Abbey, Co. Down," by J. J. Phillips, M.R.I.A.I.; "Notes on the Palace Library and Observatory of Armagh," by J. Ribton Garstin, D.L.; and "Antiquities at Castle Bernard, King's County," by Rev. Sterling de Courcy Williams, M.A.

## ROBERT BOYLE & SON, LTD.

Messrs. Robert Boyle & Son, Ltd., Ventilating Engineers, 64, Holborn Viaduct, have been honoured with the following communication from the Foreign Office, accompanied by the diploma therein referred to, which has been presented to Messrs. Boyle by the International Congress of Hygiene and Demography, in recognition of the service rendered to the public health by the introduction of their system of ventilation:—

The Under-Secretary of State for Foreign Affairs presents his compliments to Messrs. Boyle and Son, and is directed by the Secretary of State for Foreign Affairs to transmit to them the accompanying diploma, which has been received through her Majesty's Ambassador at Madrid from the Ninth International Hygienic Congress held last year in that city.

Foreign Office, August 10, 1899.

The Spanish Government have employed the Boyle system of natural ventilation in a large number of public buildings in Spain, including the Chamber of the Cortes, Government Offices, barracks, forts, hospitals, &c., and Messrs. Boyle have received a number of valuable reports in respect of these buildings. Mr. Robert Boyle during his "sanitary crusade" through Europe devoted considerable attention to Spain, and helped to awaken a deeper interest in that country in improved sanitary measures.

## ANNALS OF MONKSTOWN

AND

SOME NEIGHBOURING PARISHES IN THE  
COUNTY OF DUBLIN.

BY FRANCIS ELRINGTON BALL, M.R.I.A., F.R.S.A.I.

## CHAPTER IV.

## IN THE SIXTEENTH CENTURY.

Before describing the changes which the portion of the County Dublin, confined within Monkstown and the adjacent parishes, underwent during this eventful period it may be well to take a survey away of its condition at the commencement of the century.

Standing at Killiney, their portion of the property of the Holy Trinity, we find on the northern side of the hill a small Primitive Church built of rough stones, and a few miserable hovels inhabited by colliers whose rent is paid by work done on the Priory Farm at Kill-o'-the-Grange. The land, which is held under the Priory by a member of the Walsh Family, is but poor and barren.

We ascend Killiney Hill, and as we cross the summit, Dalkey with its busy past breaks upon our view. Its high walls, its seven castles, its churches, and the shipping with which the sound is crowded, stand out clearly in the sunlight. We enter the town through the great gates and find ourselves in the centre of an animated scene. It is one of the fair days, and the streets are full of merchants, who have come from Chester and other English towns to sell, and from Dublin to buy, goods of every kind. Along the causeway from the sea carts laden with merchandise are continually arriving, and, threading their way through the vehicles side, a number of travellers, headed by a messenger of state, with important despatches from the King to the Lord Deputy, who have landed from the ship, which has just come into the offing. In the castles—the famous warehouses of the Dublin merchants—men are rapidly stowing away the casks and packages, as they are brought from the ship, and there to be left until occasion requires their removal to Dublin.

Passing on to Rullock, the property of the renowned historian Abbey of St. Mary in Dublin, we find a strongly fortified and commodious castle, which often was, as an inn, like the Abbey house in Dublin, for travellers of rank on the journey to or from England. It is surrounded by high walls and towers, which enclose a considerable quantity of ground, and, under the walls, in the natural harbour, lies a fleet of fishing vessels, a source of no small revenue to the Abbey.

Then pursuing our way through the home farm of the Abbey, which stretches along the sea—a situation eagerly sought by the Cistercian order in selecting their lands—we come to Monkstown. Here stands the country house of "the white," or Cistercian, monks. It is a large pile of buildings, surrounded, like Rullock Castle, by walls and protecting towers. Near it are the little chapel of Carrickbrennan, and a small village, and not far off at Newtown-on-the-Strand, or Seapoint, as it is now called, which forms part of the Abbey lands, there is another village with a small stone tower house or castle.

Adjoining the lands at St. Mary's Abbey, on the northern side, lies the home farm of the Priory of the Holy Trinity. The fields of waving corn, and rich grass, shows what skill and attention, the Monks have brought to bear on the cultivation of their lands, and prove how superior their system is to that adopted by the neighbouring lay owners. In the centre of the farm, at Kill-o'-the-Grange, we find the four buildings, consisting of the Priory house, the malt house, the barn, and the cattle sheds. They are only simple thatched structures, but, primitive as they are, they have

afforded sufficient accommodation to enable the Monks to bring their large farm of some four hundred acres, into its present high state of cultivation.

On the lands of the Priory which are let to tenants—at Brennanstown, Murphystown, and elsewhere—substantial stone houses, in style more like a tower than a modern house, have been erected, and at Tully, we find, the little church in good repair, and the house near to it, the residence of the priest in charge.

Passing on to Carrickmines we come to the strong castle of the Walshs, who have rendered such valiant service in defending the Pale from the incursions of the mountain tribes. Then proceeding by Carmel's Court, the property of the Abbey of Lismullen, where there is another stone house surrounded by some cottages, we come to Stillorgan. Here we find besides the church the residence of the priest, a mill, and several stone houses occupied by the farmers, who holds the lands under the Plunkett's of Rathmore. Close by at Kilmacud stands the chapel owned by the convent of Graney with a few cottages, and on the adjacent lands of Leopardstown there is another small chapel with one or two houses.

The reformation in a district such as this, mainly owned by monastic establishments, affected a great economic and social revolution. The artificers and labourers who were employed in large numbers by the Monks, found themselves, on the dissolution of the religious houses, without employment, and the status of the tenantry was changed, as tenure by service became a thing of the past, and rent was paid entirely in money.

The alteration in the district comprised within Monkstown and the adjacent parishes would have been even greater than it was, but for the fact that the Monks of the Priory of the Holy Trinity, in order to escape dissolution, consented to become secular priests and agreed to the conversion of their Priory into a Cathedral—the Cathedral of the Holy Trinity, commonly called Christ Church. The Priory became the first Dean and, though the lands contained in the home farm at Kill-o'-the-Grange were gradually let to tenants, the Dean appears to have retained for many years a residence there.

The property of the Abbey of St. Mary at Monkstown, and at Newtown, was given to the Master of his Majesty's Ordnance in Ireland, John Travers, who had joined the army in this country a few years previously. Travers was a native of Ireland, but had been taken to England when a child. He had been for some years in the household of the Duke of Richmond, the natural son of Henry VIII., and on the Duke's death, being a "viceuly" man, was given a commission in the army. Having taken part in the expedition against the rebels in the rising under Aske, and also in the military operations in the Netherlands, he was appointed a groom of the King's chamber, and given the office of Serjeant of the King's tents. In 1539, he came to Ireland in charge of a company of foot soldiers. Travers was, in the opinion of Lord Deputy St. Leger, "a right honest man, willing, forward and diligent to serve." His courage and military skill, which were displayed in several expeditions, gained for him the honour of Knighthood, and his sagacity and ability about civil affairs, obtained for him a seat on the Privy Council, and made him one of those on whose advice the Lord Deputy relied.

The property of the Abbey of St. Mary at Rullock was given to Peter Talbot of Fassaroe, near Enniskerry, on his giving up possession of the lands held by him at Powerscourt. Talbot was some years afterwards murdered, no doubt by the Irish of the mountains, who, we find, subsequently "levying war" against the Queen at Rullock, Carmel's Court, on the dissolution of the Abbey of Lismullen, was first leased by the town, with the other property of the Abbey, to Sir Thomas Cusack, afterwards

Lord Chancellor of Ireland, who was possibly a relative of the last Abbess Maria Cusack. It was however given a few years later to Sir John Travers.

The church of Kilmacud on the dissolution of the convent of Graney, was granted to Sir Anthony St. Leger, the Lord Deputy. It was sold by him to James Bathe of Drumcondra, who became Chief Baron of the Exchequer, and was given by the latter to Christ Church Cathedral. It was then attached to the church of the Kill-of-the-Grange.

Sir John Travers resided constantly in Monkstown Castle. It was probably there he died in 1662, and on doubt he was buried in the old church of Monkstown, close to his gate, where other members of his family were interred. He was married, but no children survived him. His property he bequeathed to the daughters of the late Henry Travers, who was probably his son, and who had married a daughter of the 3rd. Viscount Gormanston. The elder of the daughters married James 3rd. Viscount Baltinglass, and the younger married John Cheevers of Macetown in the Co. Meath. Henry Traver's widow married, as her second husband, Sir Robert Pipho, to whom Sir John gave the lands of Hollywood in the County Dublin, and apartments which had been assigned to him in St. Mary's Abbey in Dublin. Pipho was a cousin of the great Walsingham, and from him, in the female line, the Earls of Tyrone, now represented by the Marquesses of Waterford, were descended.

Monkstown Castle appears to have been occupied for a time by Sir Christopher Barnewall, but prior to the year 1579 it had come into the possession of Viscount Baltinglass. In that year the rebellion in which the Viscount took so leading a part, broke out, and Monkstown Castle was frequently chosen by the chief rebels as their meeting place. Two years later the Viscount fled to Spain and there died in 1585.

The Earl of Kildare, a Kinsman of Viscount Baltinglass, tried to obtain from the Crown the custody of Monkstown Castle, but it was committed to the Vice-Treasurer, Wallop, an ancestor of the Earls of Portsmouth, who resided there for some time. In 1853 it was restored to Lady Baltinglass, who, after the Viscount's death, married Gerald Aylmer of Donadea, in County Kildare, who was knighted and created a baronet. At the time of his marriage, though never engaged in open rebellion, he was supposed to have sympathised with those who had been, and was regarded with suspicion by the English Government.

During the last half of the century the manor of Stillorgan was held by the Plunketts, and the church land at Stillorgan by the Chapter of Christ Church Cathedral, to Jacques Wingfield, Master of the Ordnance, in which office he had succeeded Sir John Travers. Wingfield had come to Ireland, a few years before Sir John's death, in the time of the Earl of Sussex, and was at first appointed to hold the office of Master of the Ordnance jointly with Travers. Soon after his arrival he rendered affective service in an expedition against the O'Byrnes and O'Tooles, but in subsequent years he discharged the duties of his office in a very indifferent manner and bore a very different reputation from that enjoyed by his predecessor. He was appointed to the Privy Council and was also given the Constablenesship of Dublin Castle. At the time of his death in 1587, his accounts were in the utmost confusion, and his property was seized by the Crown. The lands of Stillorgan were subsequently leased by the Plunketts to a family called Wolverston, members of which had served in the army under Travers and Wingfield, and the church lands were let by the Dean and Chapter of Christ Church Cathedral to the sisters of Primate Henry Ussher—probably the blind aunts, whom Primate James Ussher says taught him to read.

In addition to the Walshs of Carrickmines and the Wolverstons of Stillorgan, two other families in the district of which these Annals treat, the Goldmans of Loughlins-

town and the Archbalds of Kilmacud, became of note owing to the prowess displayed by their members in martial deeds. Amongst other owners or residents in the district, we find, towards the close of the century as tenants of Christ Church Cathedral at Kill-of-the-Grange, George Ussher, a brother of Primate Henry Ussher, by above Kill Abbey House, which bears the date 1595, was probably built; at Dalkey, Alderman Walter Ball, Mayor of Dublin in 1580, John Dungan, Second Remembrancer of the Exchequer, and the ancestor of the Viscounts Dungan, and a family called Morgan; and at Murphystown the Harolds, who at one time were a wide spreading clan of Danish descent.

(To be continued.)

## STATUES AND MEMORIALS.

It is proposed to lay the foundation stone of a Dublin monument to Parnell on the 8th October.

A public fountain is going to be put up at Dennany's corner, Glasnevin, according to the intention of the late Dr. Eustace.

About £10,000 is required for the projected monument to Wolfe Tone, the foundation of which was laid a year ago in St. Stephen's Green, Dublin.

A monument is to be erected at Thurles to commemorate the heroes of 1798. Mr. J. J. O'Shea has signed an agreement to have it completed before 1st November.

An appeal is being made to place a memorial in St. Patrick's Cathedral to the distinguished Irish missionary, the Right Rev. Charles Inglis. He was a Donegal man, and first Bishop of Nova Scotia.

It is in contemplation to erect a memorial to Father Wm. Walsh, who, in conjunction with Dr. Crane, the present Bishop of Sandhurst, obtained the necessary funds to build the magnificent church of SS. Augustine and John, Dublin.

The foundation stone of a handsome monument to Billy Byrne, the Wicklow patriot, was laid in Wicklow on 27th July. The pedestal will be over 22 feet high, and the marble figure on top will be 6 ft. 6 ins. The architect is Mr. Thos. A. Coleman, 44 Richmond place, Dublin, and the sculptor is Mr. George Smith, Great Brunswick street.

The memorial cross at Ballinakill was unveiled on 15th August. It is a Celtic Cross to perpetuate the memory of the six local martyrs who perished in the market square in 1798. The demonstration was one of the largest ever seen in Queen's County, and the Cross is a beautiful specimen of Irish workmanship.

The memorial to the late John Mandeville is, after a period of ten years, getting into shape. The delay in no way reflects on the promoters, for the committee did everything within their power to secure a site for the monument in the square of Mitchelstown, but the late Grand Jury would not grant the site. The committee also hope to erect a stone in Kilkenny graveyard where the remains of John Mandeville lie near the ashes of his celebrated uncle, Col. John O'Mahony.

## MARKET PRICES.

### OILS AND PAINTS.

Castor Oil, French	..	..	per cwt	1	5	8	1	16	2
Colza Oil, English	..	..	do.	1	3	3	—	—	—
Copperas	..	..	per ton	2	0	0	—	—	—
Lard Oil	..	..	per cwt	1	8	9	1	9	0
Linseed Oil	..	..	per cwt	1	1	0	—	—	—
Neatsfoot Oil	..	..	per gal	1	2	6	0	4	0
Lead, white, ground carbonate	..	..	per cwt	0	19	0	—	—	—
Do red	..	..	per cwt	0	17	3	—	—	—
Soda crystals	..	..	per ton	2	15	0	—	—	—
Shellac, orange	..	..	per cwt	3	4	6	3	5	0
Do sticklac	..	..	do	2	2	6	2	15	0
Pumice stone	..	..	do	0	8	9	—	—	—

## METALS.

Copper, sheet, strong, .. per ton	88	0	0	—
Iron bar, Staffs, in London .. do	8	10	0	9 0 0
Do Galvanised Corrugated sheet do	13	0	0	13 10 0
Lead, pig, Spanish .. do	14	15	0	—
Do English common bands .. do	15	0	0	—
Do sheet, English, 6lb per sq ft and upwards .. do	16	10	0	—
Do pipe .. do	17	5	0	—
Nails, cut clasps, 3in to 6 in .. do	9	0	0	10 0 0
Do floor brads .. do	8	15	0	9 15 0
Tin, Foreign .. do	142	2	6	142 12 6
Do English ingots .. do	145	10	0	—
Zinc, sheets, English .. do	140	0	0	28 10 0
Do Ville Montaigne .. do	31	0	0	—
Do Spelter .. do	24	5	0	24 12 6

## TIMBER.

## SOFT WOODS.

Fir, Dantzic and Memel, per load	3	0	0	4 0 0
Pine, Quebec Yellow .. do	4	7	6	6 5 0
Laths, log, Dantzic .. per fath	4	10	0	5 10 0
Deals, Petersburg, do .. do	4	0	0	6 10 0
Do Archangel 2nd & 1st P. Std	10	10	0	—
Do do 4th & 3rd .. do	12	0	0	12 5 0
Do do unsorted .. do	12	5	0	—
Do Riga .. do	6	15	0	8 10 0
Do Petersburg 1st Yellow .. do	10	10	0	16 0 0
Do do 2nd .. do	10	10	0	12 0 0
Do do unsorted .. do	10	0	0	10 15 0
Do do White .. do	7	15	0	11 5 0
Do Swedish .. per P. Std	9	5	0	16 10 0

Do White Sea .. do	12	5	0	—
Do Quebec Pine, 1st .. do	18	0	0	19 0 0
Do do 2nd .. do	12	0	0	—
Do do 3rd, &c .. do	7	15	3	9 15 0
Do Canadian Spruce, 1st .. do	9	0	0	10 5 0
Do do 3rd & 2nd .. do	6	5	0	7 15 0
Do New Brunswick .. do	7	5	0	8 0 0
Battens, all kinds .. do	7	0	0	8 10 0

## DEPARTMENT OF SCIENCE AND ART,

## ROYAL COLLEGE OF SCIENCE FOR IRELAND.

The Session 1899-1900 commences on TUESDAY, OCTOBER 3rd. Diplomas of Associateship are given in the Faculties of Manufactures (Chemical); Engineering, Mining, Applied Physics, (for Electrical Engineers, etc.), and Natural Science.

Two Royal Scholarships are competed for at the end of the first year, giving Free Admission to all the Courses for the two following years and an allowance of £50 per annum.

The Courses of Chemistry, Physics, Botany, Zoology, Geology, and Mineralogy, qualify for the Examinations, at the Royal University (Ireland) and elsewhere; Certificates are granted to Medical, Pharmaceutical, and other Students for Special Courses.

The Chemical, Physical, Botanical Geographical, and Mineralogical Laboratories open for Practical Work.

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Chemistry.....	W. N. HARTLEY, F.R.S., F.C.S., F.R.S.E.
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Botany.....	T. JOHNSON, D. Sc., F.L.S., M.R.I.A.
Geology and Mineralogy.....	GRENVILLE A. J. COLE, M.R.I.A., F.G.S.
Applied Mathematics and Mechanism.....	W. MCFADDEN ORR, M.A.
Descriptive Geometry and Engineering.....	JAMES LYON, M.A.

Fees for Associates from £14 to £22 per Session, according to the Faculty and Year. Non-Associate, Free-Lectures, £2 per Course (Mathematics), Laboratory Fees, from £2 upwards.

NOTE.—The Entrance Examination for the three years' Associate Course will be held on the first day of the Session, TUESDAY, OCTOBER the 3rd. Candidates should send in their names at once.

## ALL COURSES ARE OPEN TO LADIES.

The College Directory, giving full information, can be had free on application to the SECRETARY.

## APPOINTMENTS OPEN.

Appointment	To whom	Salary	Last date
Engineer to superintend drainage scheme	Waterford Urban Sanitary Authority	—	August 31st.
Chief Clerk and Indoor Assistant Manager	County Borough of West Ham	£250 to £300 a year	September 1st.
Resident Electrical Engineer	Corporation of Eastbourne	£300 a year	September 1st
Mechanical Working Foreman	Duke and Oclunden, Littlehampton	—	September 1st.
Inspector of Ways and Works, Malay State Railways	Crown Agents for the Colonies, London	1800 dollars a year	—

## COMPETITIONS OPEN.

Design	Advertised by	Premium	Last date
Isolation Hospital, Otley	Wharfedale Union Hospital Committee	£30 and £15	September 1st
Schools, Northfleet	F. Mitchell, 49 Windmill Street, Gravesend	15 gns.	September 4th.
Town Hall, Wokington	Borough Surveyor, Wokington	£40, £20 and £10	September 15th.
Public Library, Dumfries	J. Grierson, Town Clerk, Dumfries	—	September 15th.
Savings Bank, Norwich	Secretary C.E.Y.M.S. Rooms, Norwich	50 gns., 20 gns. and 10 gns.	September 16th.
Sewerage and Water Supply, Hay	C. Griffiths, Clerk, Hay Brecknock	£25	September 25th.
Designs in Tunbridge Ware	The Town Clerk, Tunbridge Wells	3 gns., 2 gns. and 1 guinea	September 30th.
Court House, and Police Buildings	County Clerk, Dunoon, N.B.	£30 and £20	September 30th.
Masonic Hall Buildings, Leeds	C. Scriven, 90 Albion Street, Leeds	£50, £20 and £10	—

## CONTRACTS OPEN.

Work	For whom	Apply to	Last date
Repairing Wall round Graveyard	Rural District Council, Letterkenny,	The Clerk, Workhouse, Letterkenny	August 31st.
Enlarging Presbyterian Church	Monaghan	Foster, Dunwoody, J.P., Monaghan	August 31st.
Representations as to Cottages	Edenderry No. 1, Rural District	Clerk of Council, Edenderry	September 2nd.
Widening Spencer Dock, Belfast	Belfast Harbour Commissioners	Mr. G. F. L. Giles, Harbour Engineer, Belfast	September 4th.
Coastguard Station, Ballycrovane	Ballycrovane	The Carpenter-in-Charge, Queen's College, Cork	September 7th.
Oil Store, etc., Portraue Waterworks	Richmond District, Asylum	G. Lennon, Chief Clerk, Richmond Asylum	September 11th.
Post Office, Enniscorthy	Office of Public Works, Dublin	H. Williams, Secretary, Office of Public Works	September 12th.

## TENDERS.

BELFAST.—For the erection of the first section of the Protestant Episcopal Cathedral, Mr. Thomas Drew, R.H.A., Architect. Laverty and Sons, Belfast (accepted).

For the partial reconstruction of the Bridge over the River Blackstaff at Great Victoria Street, for the Improvement Committee. Bright Bros. Portadown, £1,260 (accepted).

DOWNPATRICK.—For painting the inside of the Workhouse, including the entrance building, main building, infirmary, and hospital, and all other places which have been painted before, for the Guardians. J. Johnstone, Downpatrick, £62 (accepted).

DUBLIN.—For the repairs of the lightship "Torch," now lying in Kingstown Harbour, for the Commissioners of Irish Lights. Dundall Patent Slip and Shipbuilding Company (accepted).

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## NOTICES.

The *Irish Builder* is published twice a Month, on the 1st and 15th, and may be ordered from any Newsagent, or direct from the Offices—13 *Fleet Street, Dublin*.

It is the only technical journal in Ireland, and reaches Architects, Engineers, County Surveyors, Builders, Contractors, Artisans, Council Officials, Members of Trades Associations, and Public Libraries throughout the country. A specimen copy will be sent post free to any address on application.

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### Editorial.

Literary matter and drawings to be addressed to the *Editor*, and must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. We do not hold ourselves responsible for the opinions of correspondents.

Notes of works (especially contemplated works), contracts, reports, &c., are always welcome. Drawings and photographs are particularly acceptable.

### Publishing.

All business communications to be addressed to the *Manager*. Advertisements must reach the office two days before the date of publication. The charge for Contracts, Notices, Prospectuses, Competitions, &c., is 6d. per line. Other advertisement rates can be had on application.

### Payments.

Cheques and Postal Orders to be made payable to The Proprietor, *Irish Builder*.

Owing to want of space we have been compelled to hold over an account of the forthcoming Exhibition of the Arts and Crafts Society of Ireland.

## COMMENTS.

### Belfast Cathedral.

The laying of the foundation stone of a Cathedral in Belfast marks an epoch in the history of that city, and a stage in the architectural progress of Ireland. Dublin, Cork, Limerick, Derry, have all long ago been graced by such solemn piles. but in the northern capital the need for a Cathedral has come from an established and ever-increasing sense of wealth and numbers that demand an outward and visible sign of existence, such as has been adopted in every age. It has been said that cathedrals became obsolete with the Reformation, but here is one that is plainly the outcome of a modern want, made suitable to the mighty growth of a modern city. In less than a century Belfast has jumped up to a population of over a quarter of a million, with handsome public buildings, and nearly eighty churches and two hundred schools. For shipbuilding, linen, and commerce generally, it is unrivalled. and its inhabitants take pride in the pre-eminence of their business. We would refer our readers for much interesting information regarding the city to "The Town Book of Belfast," written by that industrious and talented architect, Mr. R. M. Young, B.A., M.R.I.A.

We all love our cathedrals ; not so much because they are old, but because they are grand and beautiful, and stir up within us the noblest and holiest thoughts. It is the dream of every architect to erect such worthy masterpieces, but the chance may not happen once in a century. To Mr. Drew the opportunity has come, and from our inspection of the drawings and the reputation of their author, we know the design will be a success. Further on we give illustrations and a detailed account.

### Work for the Councils.

Under this heading our excellent contemporary the *Irish County Councils Gazette* calls attention to the many questions of great practical importance which will claim the attention of the new Councils, when they are freed from their preliminary duties. First of all there is the pressing problem of the roads, which are now in mostly a bad condition. Some are anxious to have steam rollers, and point out that the ultimate cost of maintenance would be less than at present, while others hold a contrary view. The acquiring of quarries and lands for deposits must also be considered, and something more might be done to keep the roads clean.

The establishment of public libraries in towns and villages should likewise be undertaken, as well as parish halls, and every town should possess a park or recreation ground.

There is immense work to be done in the strict administration of the sanitary laws, and we notice that sanitary officers are being appointed in many parts of the country. This is only proper, but we fear their kind offices will be much resented.

Then there is the question of lighting. The price of gas in the country is extremely high, but with water power close at hand in many districts, it would be more advisable to adopt electricity, and cheaper in the long run. If this is not suitable, acetylene gas should be tried, for it forms a capital substitute.

Water supply is of paramount importance, and this should present no difficulty or great expense in most country districts.

Local industries, such as stone and slate quarries, brick works, etc., should be encouraged in every way, for the internal resources of Ireland are very great if they were only developed.

Here, then, is plenty of work for the architect, engineer, builder and contractor, and with the more settled condition of the country the prospects of employment are certainly very bright.

### Gone Up.

The *Irish Builder* has gone up a storey. So have the opinions of our readers, not to speak of our circulation. Congratulations and inquiries have reached us from all parts, sometimes from the most unexpected quarters. We are anxious to please, but we must creep before we walk. Our efforts are apparently appreciated from the fact that our newsagents sold out the last issue in three days, although we printed hundreds of extra copies in expectation of an increased demand.

## CLASSIC DETAILS AND THEIR APPLICATION.

BY G. A. T. MIDDLETON, A.R.I.B.A., M.S.A.  
Author of *House Drainage, Surveying and Surveying Instruments, &c.*

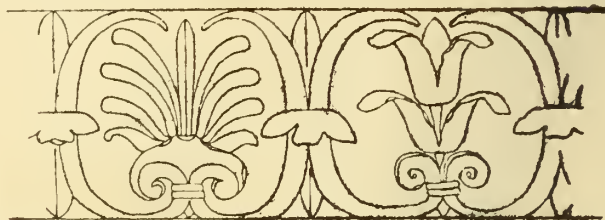
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### IV.—CLASSIC TIMES: THE ENRICHMENTS.

Although an attempt has recently been made to trace the origin of almost every Grecian enrichment to the lotus-flower of Egypt, it can be scarcely be said to be fully proved, and it is probably best to accept most of them as we find them, already perfected like the Orders, when first they appear in Greece. Exceptions to this rule are the anthemion and the guilloche, both of which are found in the Sacred Tree of Assyria, of which there are several examples upon the wall slabs in the Kouyunjik Gallery of the British Museum, dating back 800 B.C., while there is an intermediate guilloche, in point of date and of perfection, in the Archaic Room, from the Treasury of Atreus. The Assyrian wall-slabs, too, give clear indications that the Sacred Tree was derived from the palm, which is upon several of them treated in a decorative manner, arranged with symmetrical branches at equal distances apart.

As the Grecian enrichments are almost entirely confined to the Ionic order, and as each is generally to be found in one position only, it is possible to adopt some sort of sequence in their considera-

tion. Starting from the ground-level, we find the guilloche generally used upon the rolls of the base, though it is not confined to that position, and is occasionally employed upon a flat surface, as in the sample already quoted—the Treasury of Atreus. An intertwining pattern, of which the circle forms the basis, it is adapted for such a position



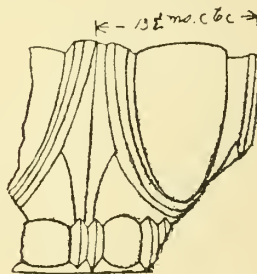
Roman Variety of Anthemion (showing irregularities) from Base of Candelabrum in British Museum.



Broken Fragment of Cornice, Athené Polias, Priene.

close to the eye, permitting of no deep cutting, and almost best used as a surface-colour decoration only, as is its rectilinear variation, the Greek fret, which was sometimes employed in this way upon the Doric abacus.

Upon the ovolo moulding between the volutes of the capital, and generally where an ovolo-moulding is used, we find the well-known egg and tongue, with generally a bead and double fillet enriching the small roll beneath. The eggs are remarkable both for the invariable beauty of their contour and for the clean finishing which is given to them at all times: rich and graduated shadows being obtained by the equally cleanly-cut eggshell (as it may perhaps be called), and by the tongue.



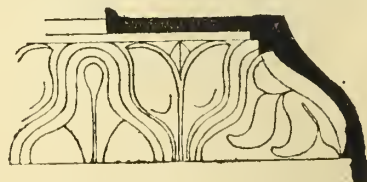
Egg-and-Tongue, and Bead-and-Fillets, Temple of Diana, Ephesus.



Fragment of Lion's Head, Temple of Diana, Ephesus.

The similarly-named leaf-and-tongue is probably but a variant of the egg; but it is employed universally upon a cyma-reversa moulding, and it has been often remarked how well each of these enrichments is adapted to its

position, the outline of each being similar in character though not identical in form, with the contour of the moulding which it enriches, and in which it is cut; for it will be noticed that this contour is preserved both in eggs, the leaves, and the tongues. (See photograph below).



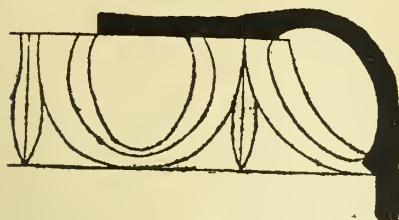
Leaf-and-Tongue Enrichment, Temple of Mars Ultor, Rome.

The cyma recta, which commonly forms the top member of the Ionic cornice, is commonly enriched, as has already



Broken fragment of Akroterion, Temple of Diana, Ephesus

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Leaf-and-Tongue Enrichment Temple of Mars  
Ulpior Rome.

been said, with lions' heads, at equal distances apart, forming water-spouts, and between these there is either a scroll of acanthus-leaves and

being terminal ornaments only, and the latter fulfilling a constructural function. Both are usually devised as variants of the anthemion in some form or other, as is the deeply-cut and much-destroyed example illustrated herewith, and through-out the best Greek period are always of considerable beauty.

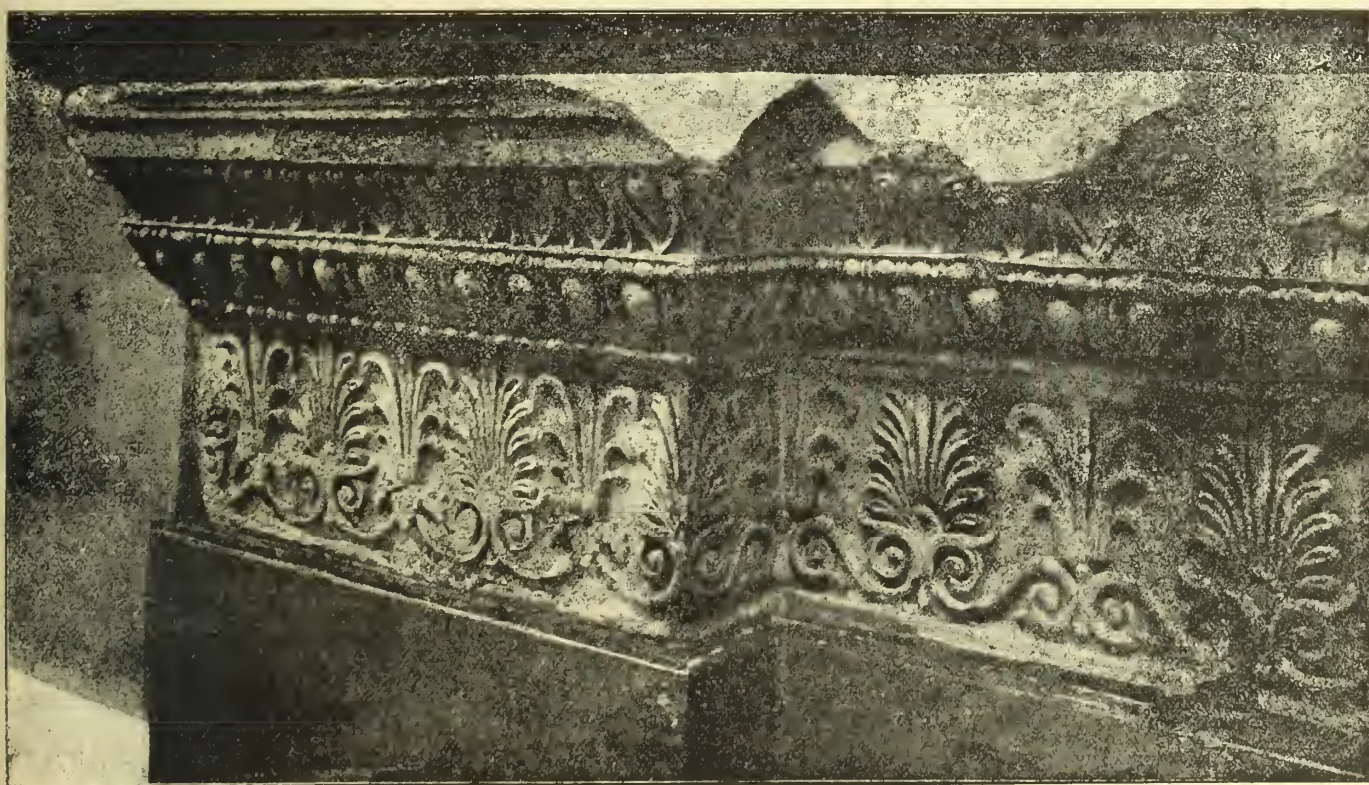
anthemion, or else the anthemion alone in its two variations of honey suckle and palmatte alternately. The anthemion however, is not entirely confined to this position, but is occasionally found upon a vertical surface, as at the Erechtheum, both round the neck of the columns and upon the frieze. The photographic illustration of the latter exemplifies two slightly different varieties of the ornament, and shows well the wonderful precision of the workmanship, the beauty of the curves, and the use of only a few principal lines to express the carver's meaning everywhere. The surface curves, too, are restrained and few, adding charm yet scarcely perceptible upon mere casual observation, particularly in the original position of the frieze, far above the eye.



ETRUSCAN ANTEFIX.  
(From the South Kensington Museum.)

The difference between the enrichments as used by the Greeks and used by Romans is not so much a matter of their form, though the change there is considerable, as in the spirit in which they were applied and worked. The Greeks employed them, with great restraint, to set off and accentuate the beauties of an already beautiful structure; the Romans often, if not exclusively, in a more obtrusive way, in order to draw attention to their own richness and profusion, and to give the effect of lavish wealth. So long as this effect was produced, it seems to have been frequently a matter of comparatively small importance whether the design of each separate part was beautiful, or whether the curve of each individual line was pleasing or perfectly obtained; and as time went on this laxity produced license, and the forms became debased and comparatively crude. Natural leaves and forms of animals were introduced and intermixed, and even in the conventional forms of foliage a crinkled surface became common, destructive of all purity of line.

In these respects the work of the Etruscans, as judged from the cornice recently set up in the British Museum, and from the antefix at South Kensington, is better than that of the later Roman times, and, in fact, seems to be a reflex amongst civilised people of the works of the Greeks themselves; and, amongst the Romans, the detail of the earlier period, founded more directly upon the Grecian,



FRIEZE AND CORNICE OF THE ERECHTHEIUM.  
(From the British Museum.)

The use of sculpture as an enrichment has already been mentioned; and in this regard it need only be added that it is always confined within proper limits, to embellish the architecture and not to over-ride it, occupying some definite position, as a frieze, or tympanum, or metope, or standing as statutory midway between columns, always framed or in some way cut off from all else, and never on any account mixed up with the conventional foliage ornament of anthemion or acanthus.

Other enrichments which demand notice are the akroteria and their small relatives the antefixæ—the former

and often executed by Grecian artificers, was more pure than that of later date.

Comparing the illustrations of egg-and-tongue, leaf-and-tongue, and anthemion, the change will be at once apparent. Though applied much in the same position as before, the contours of the mouldings, it will be remembered, had undergone a change, and the buildings, too, which they enriched were of a different and more varied character, so that the greater rotundity and voluptuousness is, after all, not to be wondered at, and is, in fact, in many cases more suitable than extreme refinement would have been.

It is natural to find that the debasement of form that the workmanship deteriorated also. The lines are no longer so crisply and so clearly cut, and consequently the few have to give place to the many in order to produce a like effect; and often the setting out is bad, the two sides of a symmetrical ornament far from coinciding, and the centre-line not truly kept.

As to what happened in the luxurious days of the later Roman Empire, a glance at the pseudo-Ionic capitals illustrated herewith should suffice in place of much description. The idea having become prevalent that the Ionic volute was derived from rams' horns, you find rams' heads used here in their place, and supported, in an æsthetically incorrect way, by yielding crinkled leaves, from which spring scrolls around the bell. Then, between one ram's head and the other there is a large roll, not ornamented by the egg-and-longue, as in Greece, but by mere surface-carved natural representations of oak-leaves and acorns, and over the centre of this is a human mask. Degradation could scarcely go further, yet it is suitable to its date and to the people who produced it, and was probably, if more were known about it, suitable also to the building to which it belonged, just as were the rich tessellated pavements of the same epoch, adorning the public baths and the houses of the more wealthy of the people, whose wealth was coarseness rather than high refinement or intellectuality.

*(To be continued.)*

## THE BELFAST CATHEDRAL.

MR. THOMAS DREW, R.H.A., F.R.I.B.A., ARCHITECT.

The foundation stone of Belfast Cathedral was laid on Wednesday, 6th inst., by the Countess of Shaftesbury. The want of a great central church for the united diocese of Down and Connor and Dromore and for the City of Belfast has long been felt, and there is as yet no church in a suitable position capable of accommodating large congregations for important services or festivals, and structurally agreeable for ordinations, visitations, and other functions of a metropolitan or diocesan church. At a public meeting a committee was chosen to take steps for raising funds to meet the preliminary expenses connected with the project, and to select an architect who would report upon the work and supply designs. After much deliberation the committee nominated Mr. Thomas Drew, R.H.A., of Dublin—a native of Belfast, and a son of the late Rev. Dr. Drew—and Mr. William H. Lynn, R.H.A., of Belfast, joint architects to the proposed cathedral. Mr. Lynn subsequently, while expressing his willingness to continue to advise generally in the matter, elected to leave the more responsible duty of preparing the design for the building in the hands of Mr. Drew, and, having done this, he particularly requested, as a point of professional etiquette, that Mr. Drew's name alone should appear in connection with the drawings and report. The committee had reluctantly to acquiesce in this decision, but they were glad to know that they would not thereby be deprived of the benefit of Mr. Lynn's great taste and experience, which, it can safely be said, have proved of great value throughout. Indeed, the committee and the friends of the project generally are much indebted to Mr. Lynn for the trouble he has taken in regard to the designs and for the assistance he has rendered to his brother architect, Mr. Drew. In 1896 Mr. Drew submitted a



TWO PSEUDO-IONIC CAPITALS (LATE ROMAN).  
(From the British Museum).

design for a very beautiful Gothic cathedral which was much admired, but after due deliberation it was found necessary to abandon this for various reasons, chief amongst which were the limited nature of the site, the difficulty of adding to it, and the lack of funds. In place of this,

### A BYZANTINE DESIGN HAS BEEN ADOPTED

by the committee, on the recommendation of Mr. Drew and Mr. Lynn, which, while giving greater and, in some respects, better accommodation, will cost a very much smaller sum of money, and will also, while capable of future enlargement and adornment, be more easily built in instalments as funds are available. A conspicuous feature will be a handsome west front in Donegall street, which, however, will not be built at present, except in part. The nave and aisles will accommodate about 2,000 people and the completed cathedral about 3,000, so that it will be the most commodious church in Ireland. A contract for the erection of the first portion of the building has been entered into with Messrs. Laverty and Sons at a cost of £19,384, and the estimated total cost of the completed cathedral is £70,000, including a central dome or tower, with the belfry to contain the peal of bells costing £2,000, which Mr. W. Gibson, of the well-known firm of Messrs. Gibson and Company, Limited, has generously offered to present. An architectural description of the cathedral appears below. Suffice it to say here that the building which it is thus proposed to erect will be technically the parish church of Belfast, but it will be so arranged, even in its incomplete state, as to accommodate the deans and chapters of the three united dioceses and in other respects to be capable of supplying all the proper functions of a cathedral.

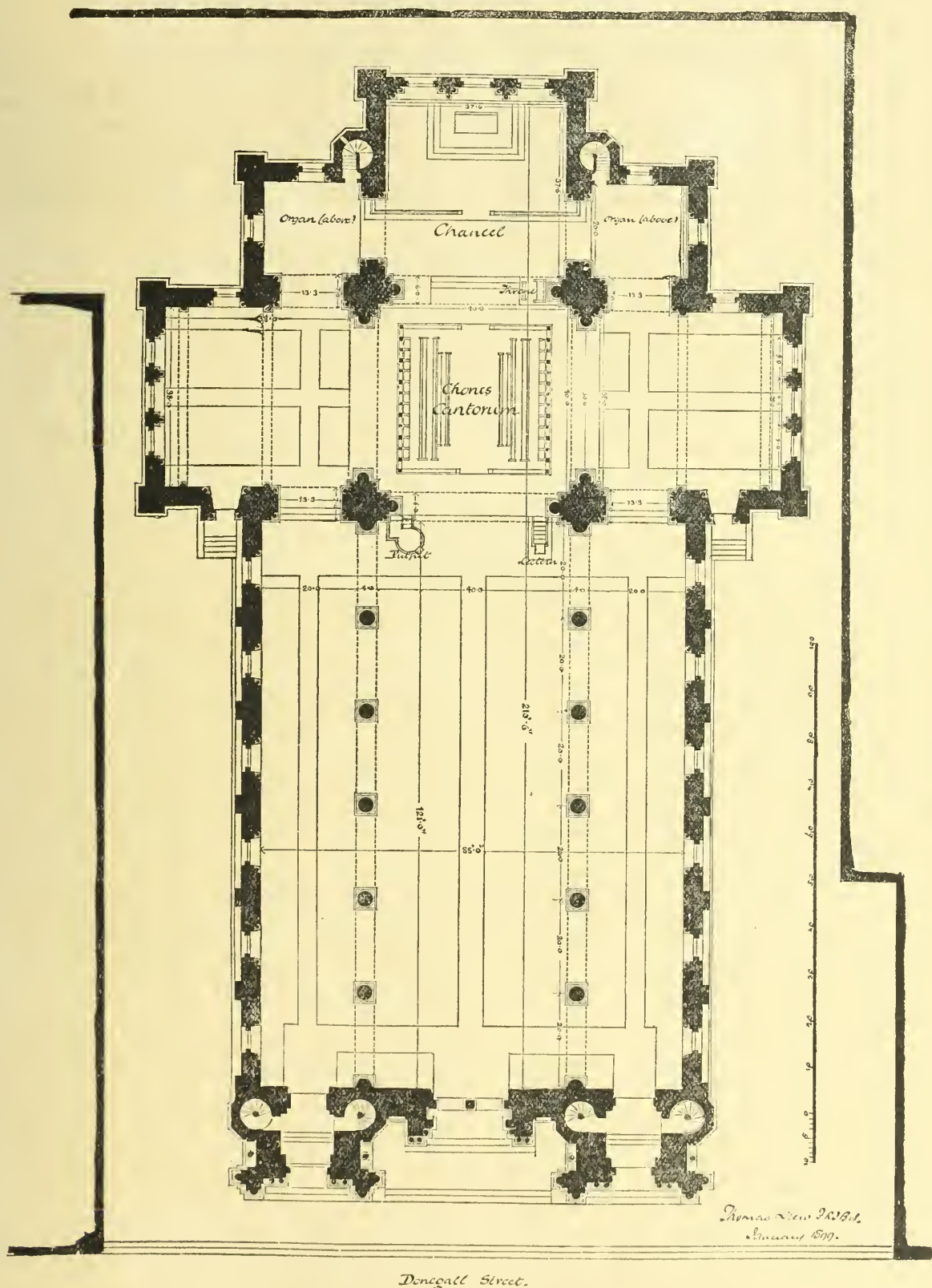
### Architectural Description of the Cathedral.

BY MR. DREW.

Forty years ago Mr. Beresford Hope published a work entitled "The Cathedral of the 19th Century," which was distinguished by erudition combined with practical common-sense, and which excited much attention by its novelty. Later, the lamented Archbishop Benson, when Bishop of Truro, contributed his book "The Cathedral." In both the arguments in favour of the cathedral as a reasonable institution of the Reformed Church of England, and a necessity in true organisation of Church life in the nineteenth century, were overwhelming and convincing. Yet, strange to say, the ideal cathedral of the nineteenth century has never been realised. It may be said that the Churches in England and Ireland have built but three or four cathedrals since the Reformation. They have had no occasion to build more, for the unreformed Church left them such a heritage of grand churches that scarcely a city or diocese wanted a church noble enough for cathedral use. These, however, with all their grandeur of architecture, were essentially the

outcome of monastic system, of a separated clergy and laity, and could not present a precedent for the cathedral plan of the modern church, such as Mr. Beresford Hope advocated. Nor can it be said that any of the post-Reformation cathedrals have set a precedent in accordance with his argument. St. Paul's, the great classic Basilica of Wren, a national monument and temple, may be dismissed as no model for the great Church of modern diocesan needs. A small cathe-

**NO PRECEDENT FOR MODERN DEVELOPMENT.** It is but a fair reproduction on a small scale of the English mediæval church of the 13th century, correct in its reproduced details, and so far beautiful, if not very interesting. Truro Cathedral, the remaining example of the century, is under the more masculine influence of Benson and the architect Pearson, a happier design. There is no want in the habits and fashion of worship in the English Church that



Donegall Street.

PLAN—BELFAST CATHEDRAL.

dral built at Cork, handsome and costly in its fabric, and probably commensurate in size with the wants of that diocese, is rather an architectural curiosity than a suggestion for modern cathedral building. It is a clever reproduction by a skilful architect of a French church of early thirteenth century, an exotic planted on Cork soil, and an interesting study of architectural *finesse*. Edinburgh has built a cathedral, but it presents

has not been reasonably thought out and provided for; but, again, its plan and architecture are those of the English mediæval church, and its scale so small that it forms no precedent for the mother Church of a populous diocese and great congregations.

It will be strange if Belfast should be the first of cities since the 16th century to strike out a precedent for others in realising a church which will be an expression of the

Church life of this century, essentially an outcome of the system and congregational wants of the Reformed Church of England, and the spirit that Mr. Hope contended for forty years ago. It is hard for clergy or architects to break away from old Church traditions, endeared to them by the charm of old architecture and services of incomparable beauty associated with it. It has been solved as a problem for them in Belfast by financial deficiencies and the manifest need of a great congregational church—primarily for an overflowing population. The promoters of the cathedral had first designed a noble church, on paper, following the precedents of style and plan so long associated with the English cathedral. It was possible for an architect and familiar student of past architecture to recall the beautiful detail of English 13th century church-building and fashion work in an imitative spirit. This attractive design was in plan of the size of St. Patrick's Cathedral in Dublin, and its estimated cost £200,000. Even if such a vast sum of money had been forthcoming in this diocese it is a question whether a church to hold 2,000 people would have fulfilled

#### THE IDEAL OF CONGREGATIONAL PURPOSE IN CATHEDRAL SERVICE

which the Bishop and Canon O'Hara and his friends aspired to. The impossible was abandoned for a possible type of church of simpler architecture and less costly, and the architects, who advised willingly and with renewed interest, took up the problem of designing a church under paramount conditions and circumstances which had not a precedent in other cases.

The primitive church and not the monastic mediæval church in its first conception of the Cathedral, seemed to set the fashion of church which met the modern wants, as was indeed the argument of Mr. Beresford Hope. The early church adopted the Roman Basilica, or public court as they found it, for Church use, and in the development of churches in the early centuries the original Basilican type of plan was more or less retained. Many of the churches of Northern Italy still surviving present modifications of the original and spacious plan, and are suggestive of great congregational purpose. Basilican in its general type of plan accordingly is the new Cathedral of St. Anne at Belfast to be. For comparison with the Gothic type, it may be instanced that the National Cathedral of St. Patrick has a nave thirty feet wide. The Diocesan Christ Church of Dublin has but twenty-five feet span. The new Cathedral will have a forty-foot nave. The disposition of its parts will be broader, simpler, and its fewer arches springing over wider spans than in a typical Gothic church. The Basilican plan proper in this case consists of a nave 40ft. span, with aisles extending to a total width of 88ft., a dome or centre choir 54ft. by 54ft., and a chancel extending eastwards for 40ft. further, with two-storeyed aisles, in the upper part of which the organs will be placed. The whole length internally when complete will be 214 feet. From each side transepts project north and south at the "crossing," each with a floor space of 40ft. square. The choir will be placed at the "crossing"—again following the primitive precedent rather than mediæval—as it were among the body of the congregation, in the enclosed division known in the early church plan as "chorus cantorum." Appropriate stalls will be placed here, according to invariable custom, for

#### THE CATHEDRAL CORPS OF CLERGY,

which in this case will amount to no less than twenty-four dignitaries, with other assistant clergy who will be entitled to place and to serve in the common Church. The choir for singing men and boys will be unusually spacious, accommodating seventy voices if required for occasion, while the transepts behind them will be convenient for a large body of assistant voices on occasions of choral festivals, singing with and led by the skilled choir. That the great church is to be free and open for all other of the 4,000 worshippers than the immediate ministrants goes without saying. It is

essentially characteristic of the cathedral that in it as the mother church and parish church of the diocese every member of the Church has his property and entry as of right, bidden or unbidden, at all ordinary times. The plan and proportion of the Church are singularly simple and arithmetical. A nave of 40ft., aisles of 20ft. width, six bays of the nave each of 20ft.; the crossing, transepts, and chancel, each within their piers, square of 40ft.; the internal height of the aisle walls is 36ft, and of the nave and its clerestory 72ft.

For what is known as agricultural "style" the architect has had to adapt his design to what seemed to him harmonious with a Basilican plan. To have imitated the Classic Renaissance manner of some Italian Basilican churches would be, in his view, to create a hall somewhat secular and unchurchlike in its associations. The later Italian churches where a pointed style of Gothic architecture is ingrafted on a surviving Basilican plan, seemed still more incongruous and unworthy of respect. He has adopted a round-arched treatment, the main suggestion of which comes from that Byzantine source, which impressed itself on the early church architecture that came through Italy by way of the South of France to England and Ireland, and gave us in these countries such noble round-arched architecture as seen at Durham or Tuam. The striking "Romanesque" architecture of southern France presents, perhaps,

#### THE PUREST TYPE OF A NOBLE ARCHITECTURE,

which is suggestive to an architect and consonant with the Basilican plan. The west front, to face Donegall street, 't is to be hoped, may be seen by a present generation. For the present it will exist only in the architect's sketch, but if realised would certainly present a remarkable and striking facade. The nave and its staircase turrets rise to 105 feet above the pavement, and in front of them the three great portals which come forward from the nave and aisles extend to 100 feet. The great central portal of double doors is embraced in a receding series of arches, of five orders, with shafted and sculptured recessed jambs. The outer arch or order is 40 feet high and 37 feet wide, and is on the same scale as the great west portal of the Cathedral of Genoa, which is also proportionate to a great nave of 40 feet width. A sum of £70,000 will be needed to carry out the architect's whole design, inclusive of what he recommends—a central dome or tower at the crossing, giving a great belfry of the unprecedented floor space of 40 feet x 40 feet, worthy of the noble peal of bells with which it is known Mr. W. Gibson is prepared to endow a cathedral in his native city. The present contract with Messrs. Lavery and Sons extends but to £19,384, which will embrace piling and erection of the shell of the nave only.

Mr. Thomas Drew, R.H.A., a native of Belfast, who was forty-five years ago a pupil of Mr. Charles Lanyon, and for more than thirty years the honorary diocesan architect, and is consulting architect to the Cathedrals of Dublin and Armagh, is responsible for the design. Mr. William H. Lynn, R.H.A., so long known in Belfast, has given willing and able aid to the scheme as advising architect.

**The Templemore Council** have appointed Mr. P. Gleeson as their engineer, as Mr. J. K. Bracken has declined to act as town surveyor until he could be released from the contracts he held from the late Grand Jury.

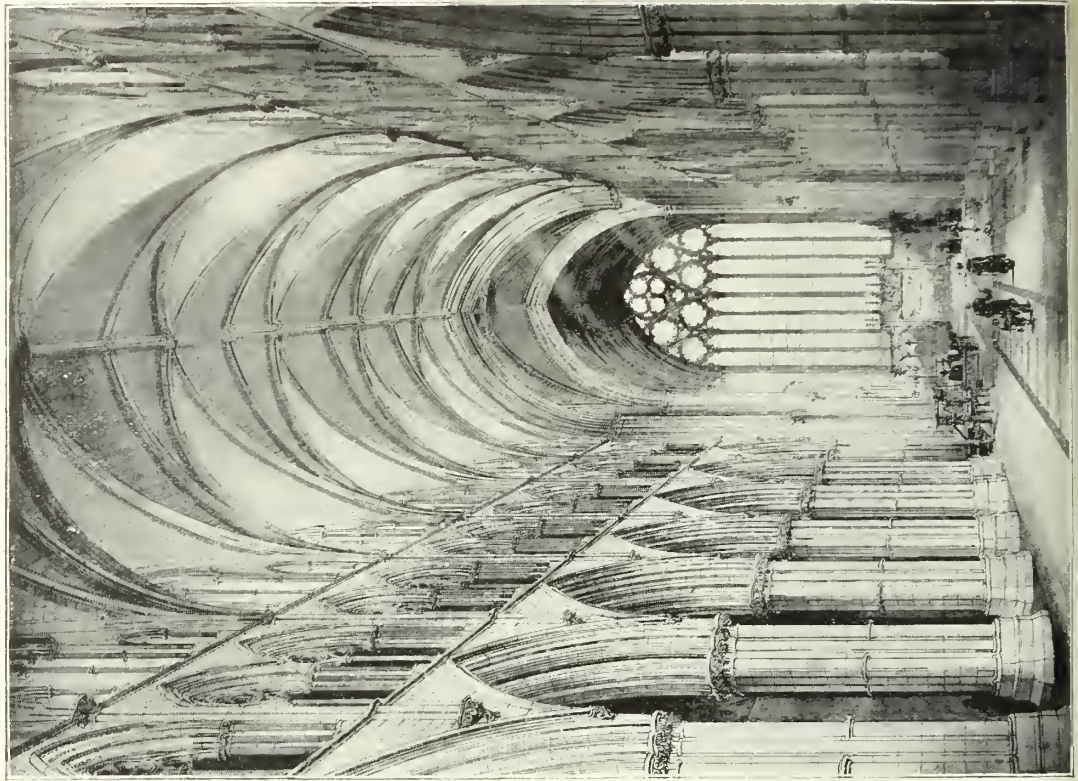
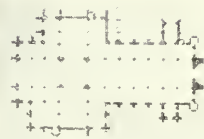
**An Examination** is announced for the post of Valuer and Surveyor in the Valuation Office, Dublin. The salary is £120 to £450 per annum, the limits of age being 21 to 28. The last day for applying to the Secretary, Civil Service Commission, London, is 12th October.

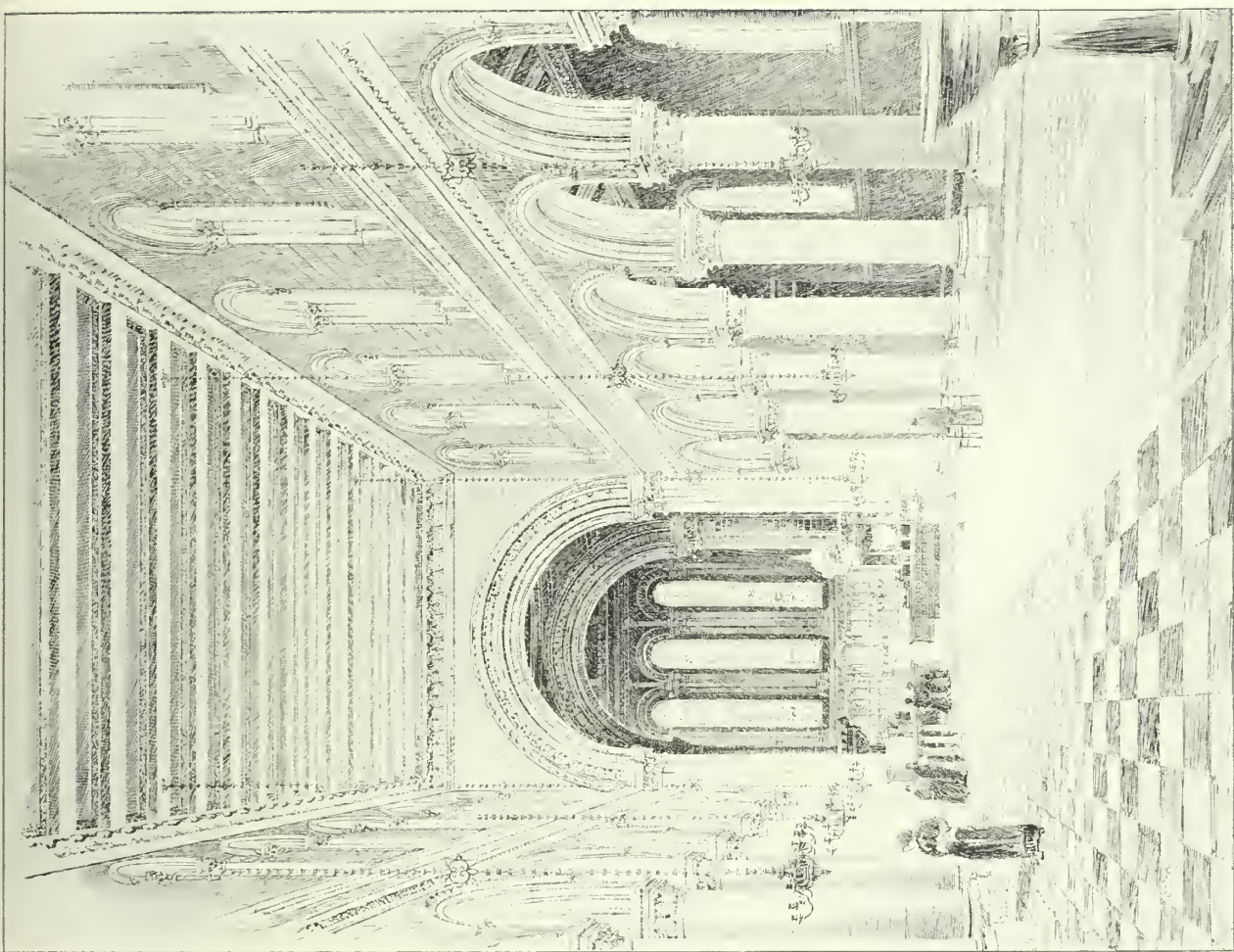
**The Wexford Timber Company** has been formed and consolidated by the amalgamation of the timber firms of Messrs. Jasper Walsh and Co., and Mr. Michael Bunis, on the Quay. Both firms have been established half a century, and have enjoyed practically a monopoly of the entire timber trade of the district. Mr. John F. Walsh will act as managing director of the new company.

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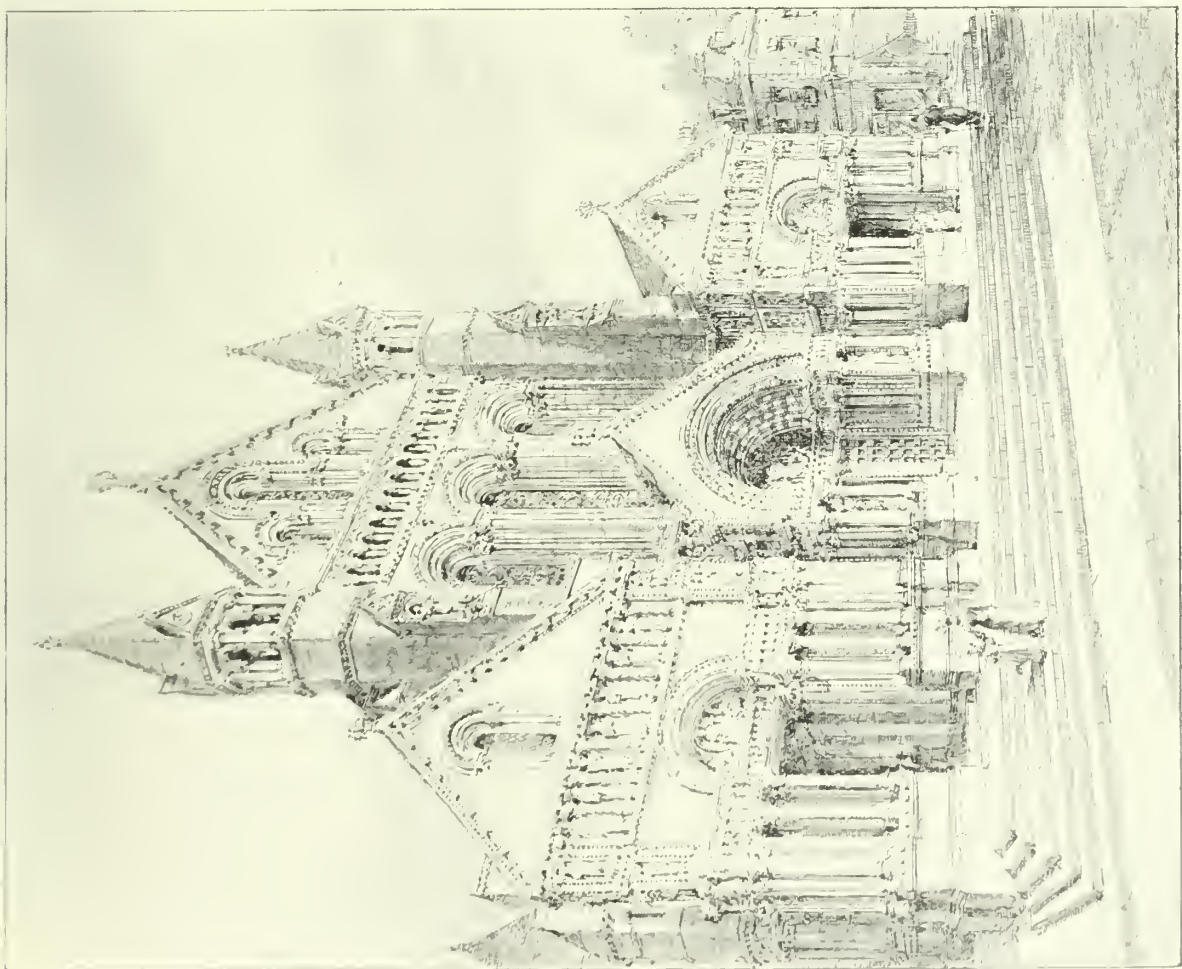
# BELFAST CATHEDRAL.

THOMAS DREW, F.R.I.B.A., ARCHITECT.





SECOND DESIGN—INTERIOR



SECOND DESIGN—EXTERIOR

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## BUILDING NEWS.

**Antrim.**—It is expected that the new Asylum for Antrim will be opened during the present year.

**Ardee.**—The Ardee Board of Guardians have called for tenders for the building of an addition to the kitchen of the Workhouse Hospital, in accordance with the plans of their architect, Mr. Louis Turley, Laurence-street, Drogheda.

**Arklow.**—The new Church of St. Saviour's, Arklow, is a very fine building. It was designed by the distinguished architect, Sir Arthur Blomfield, A.R.A., and the contractors were Messrs. John Thompson & Son, of Peterborough. The church consists of nave, north and south aisles, transepts, chancel, vestry, and organ chamber, and is built in the early English style. At the western end there is a handsome tower, the spire of which reaches 150 feet. It contains a fine peal of bells by Taylor & Co., of Loughborough, and a clock by Smith & Sons, of Derby. The external walls are built of rock-faced granite, from Lord Carysfort's estate, with dressings of Monk's Park stone, the internal facings and dressings being chiefly of Corsham stone, with green Connemara marble shafts. The roofs are covered with lead. The floors of the passages, chancel, and lobbies are formed with Rust's mosaics, and the spaces occupied by the seats with solid blocks, executed by Geary & Co., of London. The reredos is of Corsham stone, with Connemara marble shafts and mosaic panels. The fine large sculptured panel of the Last Supper is the work of Mr. Thomas Nicholls. The marble shafts and steps are from the establishment of Mr. R. Colles, Kilkenny.

The east window of the chancel and the west window of the tower are fitted with stained-glass by Messrs. Clayton & Bell. The gas fittings and brass lectern are by Messrs. Hart, Son, Peard & Company, and the gas apparatus was put up by the Ideal Gas Company. The organ, which is placed over the vestry, is by Messrs. Lewis & Co., and the heating apparatus by John Grundy. The stone-carving was executed by Messrs. Earp & Hobbs, London, and the wood-carving throughout by Messrs. John Thompson & Co. The work was carried out under the immediate supervision of Mr. Benjamin Darling. Excellent photographs of the new church—the exterior and interior—have been taken by Mr. J. A. Keane, of Arklow.

**Armagh.**—The Armagh Board of Guardians have decided, owing to the increase of work, to build new offices, and have applied for a loan of £450 from the Board of Works.

**Bailieboro'.**—A special meeting of the Bailieboro' District Council was held three weeks ago to consider a scheme for the erection of cottages. It was agreed to build 16 cottages, and 81 cottages have already been erected in the union. Mr. Thomas Daniel, Bailieboro', was appointed architect.

**Ballycare.**—A most destructive fire recently destroyed a very large portion of the extensive premises of the Whitepark Dyeing and Finishing Company, owned by Mr. R. V. Carse, Manchester. The damage is represented by £15,000, and the works will have to be rebuilt.

**Banagher.**—Within the past few years St. Reynagh's Chapel, Banagher, has been completely overhauled and remodelled. The work was carried out by the late Mr. Hague, architect, of Dublin. The gables were pulled down and rebuilt, and the roof re-cast at heavy expense. The inside of the church is now being decorated and painted, Mr. Mark Quigly, Birr, being the contractor.

**Barracks.**—New barracks are to be provided at Bun-crana, Athlone, Belfast, Buttevant, Fermoy, Holywood, and Limerick, during the course of the year. For barracks at Ballincollig £25,000 is set down, and the same sum for the improvement of existing barracks at Tipperary, as well as £50,000 towards the reconstruction of Curragh Camp.

At the latter place an immense job of over £250,000 will shortly come off, as soon as the specification and quantities are prepared. This will be the biggest single contract in Ireland.

**Belfast.**—A large technical school is about to be erected in the city, and an architect will shortly be appointed.

A new warehouse and manufactory is about to be put up in Elizabeth-street for Messrs. Wheeler and Co., Limited, in accordance with the plans and specifications of the architects, Messrs. J. J. Phillips & Son, 61 Royal Avenue, Belfast.

**Birr.**—The Birr Poor Law Guardians are promoting a scheme for the building of 36 cottages in the union, each with an acre plot.

**Brownstown.**—New hotel premises will shortly be built at Brownstown, near Kildare, for Mr. Bowen. Mr. J. J. Inglis, architect, of Newbridge, is preparing the designs.

**Carrickmacross.**—In recent years the castle built in Carrickmacross by the Earl of Essex, and subsequently the Irish residence of the Bath family, passed into the hands of the Sisters of St. Louis. Many structural alterations were necessary in the interior of the historic pile in order to adopt it to the requirements of a modern first-class boarding school, which alterations are now practically completed.

**Carrick-on-Shannon.**—The Carrick-on-Shannon No. 2 Rural District Council have formulated an Improvement Scheme for labourers' dwellings, the estimated cost of which is £5,460. All information can be obtained from Mr. A. O'Connor, Clerk of the District Council.

**Celbridge.**—The Rural District Council of Celbridge, Co. Kildare, will erect twelve cottages from the designs of their architect at 33 Kildare-street, Dublin.

**Clonakilty.**—Closets, bathrooms, lavatories, &c., will be put up in the Workhouse Hospital, from the plans and specifications of Mr. F. V. Johnson Travers, architect to the Guardians.

**Clontarf.**—Plans of the proposed Workmen's Dwellings were submitted to the Urban District Council by their surveyor. There were three different designs, the cost varying from £105 to £115. It was proposed to let the houses at from 2s. 6d. to 3s. a week. To begin with, it was suggested that a dozen houses should be erected.

**Cork.**—The Guardians of the Cork Union are about to repair the Dispensary Residence at Carrignavan. They also intend making extensive alterations in the Liberty street Dispensary.

A Coastguard Station is about to be erected at Ballycro-vane, Co. Cork. Further information can be obtained from the Carpenter in Charge, Queen's College, Cork.

Additions are to be made to Fermoy House, from the plans and specification prepared by the architects, Messrs. W. H. Hill and Son, 28 South Mall, Cork, with whom tenders were lodged on the 11th inst.

**Curragh.**—A large new Post Office will soon be put up at the Curragh Camp, tenders having been called over a month ago. The erection of the building will be in charge of the Office of Works.

**Dalkey.**—Tenders will be lodged on 20th inst. for the erection of 14 Working Class Dwellings on Porter's Road, Dalkey. Further information may be obtained from Mr. J. P. Gahan, Clerk to the Council, Town Hall, Dalkey.

**Donaghdee.**—The block from which we illustrated the new Masonic Hall at Donaghdee, Co. Down, in our last issue, was kindly lent to us by the *Belfast Evening Telegraph*, the photo. having been taken from the sketch by Thos. N. Murray and Co., 3 Clarence Place, Belfast. The architects were Messrs. J. J. Phillips & Son, Belfast, and not Mr. William Curragh, who was the builder.

**Dublin.**—In a Parliamentary paper £13,000 is set down for the purchase of a site adjoining the Dublin Museum of Science and Art for a new Royal College of Science. Nos. 1, 2, 3, and 4 Upper Merriam Street have now been acquired, giving a site of over 50,000 square feet.

Additions will shortly have to be made to the National Hospital for Consumption, which is getting too small for the increasing number of patients.

Under the Agriculture and Technical Instruction Act, it is intended to spend £15,000 for the establishment of a Veterinary College in Dublin.

Tenders were lodged on the 11th inst. for the erection of a Car Shed at Phibsborough, Dublin, for the United Tramways Company, 9 Upper Sackville Street.

Sundry works are to be done at George's Street Residence for the National Board of Education, according to the specification of the architect, Mr. J. F. Fuller, 179 Great Brunswick Street, Dublin. Tenders are to be delivered to-day, 15th inst.

A new Fire Brigade Station is in the course of erection at Lower Buckingham Street; it is built of red brick, and the builders are Messrs. J. Pemberton and Son, 23 Charlemont Street.

The Artisans Dwellings Committee have under consideration the erection of dwellings on the Bride's Alley area, and the works are being rapidly pushed forward by the City Engineer's and City Architect's department.

The Corporation have decided to prepare a very important scheme, setting forth the best way of dealing with the housing of the working classes, so that the poor might be better housed, the slums cleansed and put in order or closed, and the health and well-being of the citizens safe-guarded. The Corporation have already spent £160,000 on buildings of this class, and the root of the question is the cost of sites.

The South Dublin Rural District Council have instructed their Clerk of Works to prepare maps, plans, and estimates, for 89 new Cottages in the Whitechurch, Clondalkin, and Tallaght electoral divisions.

The North Dublin Rural District Council have approved of the erection of a building in Blackhorse lane consisting of reading-rooms, library, etc.

The foundations are now being laid of two large blocks of buildings in Exchequer street on the space formerly occupied by Messrs. Pim's furniture warerooms, and the plot of open ground adjoining it. Each will have the large frontage of 80 feet, while they will be of a uniform depth of 75 feet. The work of construction will occupy twelve months, and the contractors for both structures are Messrs. J. and P. Good, of Great Brunswick street. They will be constructed of Irish brick, and limestone will be used for facing, the estimated cost of both buildings being £20,000. Mr. Mitchell is the architect for Messrs. Pim's buildings, and Mr. Byrne has designed the Market Company's premises. Mr. Hayes is the clerk of works, and Mr. P. J. Hynes is the foreman in charge.

**Dundalk.**—It is understood that the contract for the new Post Office at Dundalk has been secured by a Belfast firm. It will be mainly of red brick, with cut stone fittings, and the cost is somewhere about £4,000.

The Dundalk Urban District Council have applied to the Local Government Board of Ireland for their sanction to loans of £17,000 for erecting artisans' and labourers' dwellings, £1,400 for the purchase of the Grammar School buildings and their conversion into a free library, £800 for the improvement of the Town Hall, £150 for Market Stalls, and £130 for a fire escape.

**Gorey.**—Alterations and additions are to be made to the west building of the Workhouse, tenders for which were sent in on 9th inst. Mr. R. Creighton is clerk to the guardians, from whom further information can be obtained.

**Greystones.**—We omitted to mention in our number of 15th August that the additions to the Presbyterian Church at Greystones were from the designs and under the superintendence of Mr. H. J. Lundy, M.R.I.A.I., Architect, Dame street, Dublin. The contractor was Mr. Henry

Richard Evans, the cost of the work being about £600. It is contemplated to add a tower and spire in the immediate future.

**Lisburn.**—The foundation stone for the new Sloan street Presbyterian Church, Lisburn was laid on 1st August. The architect is Mr. Henry Hobert, Dromore, and the builder Mr. James M'Nally, Lisburn.

**Londonderry.**—It is proposed to erect another Lunatic Asylum at Derry.

A Methodist Church in Carlisle road will also be immediately started, the architect for which is Mr. A. Forman, 5 Castle street, Londonderry.

**Lurgan.** The foundation stone of the new Masonic Hall, Windsor Avenue, Lurgan, was laid on the 9th August. The architect is Mr. Godfrey Ferguson, and the builder, Mr. Thomas McMillan, both of Belfast.

It is intended to erect a large school building in the same Avenue shortly.

**Portrane.**—It has been decided to add a mortuary and baths to the Portrane Asylum now in progress near Dublin. Mr. Thomas Drew, F.R.I.B.A., of Clare street, Dublin, is the architect.

**Richmond.**—The Governors of the Richmond District Lunatic Asylum are about to erect a new oil store, etc., at considerable cost.

**Sligo.**—Tenders, accompanied by detailed estimates, are invited for the heating and ventilation of Sligo District Lunatic Asylum, before the 3rd October. The architects are Sir T. N. Deane and Son, 3 Upper Merrion street, Dublin.

**Tipperary.**—Three houses are to be built in Main street, from plans by Messrs. W. H. Hill and Son, Architects, 25 South Mall, Cork.

**Tullygoan.**—A Parochial House is to be put up at Tullygoan, Feeney, Co. Derry. The architect is Mr. J. P. M'Grath, 28 Carlisle road, Londonderry.

**Waterford.**—A new hotel is being built here by the Granville Hotels Company. Mr. W. H. Lynn, R.H.A. is the architect, and the builders are McLoughlin and Harvey, both of Belfast.

**Wexford.**—Extensive alterations are being made in the operating rooms of the Wexford County Infirmary.

## ENGINEERING NEWS.

**Athlone.**—The Local Government Board has approved of £4,500 being spent for the improvement of the Athlone Gas Works, the repayment of the loan to extend over thirty years.

**Ballycastle.**—Mr. James F. M'Kennon, C.E., has drawn up a plan and specification for the sewerage of Ann street, which were presented to the District Council. The sewerage of Cushendall is also to be taken in hand.

**Bandon.**—At the Bandon District Council it was recently proposed to construct waterworks at Innishannon. Mr. Evans will be the engineer.

**Belfast.**—The Improvement Committee have accepted the tenders of Mr. W. J. Shaw for cement, and of Messrs. Bright Bros. for the reconstruction of the bridge at Great Victoria street.

A Local Government Board inquiry was held in the Town Hall into the matter of several loan applications by the Belfast County Borough Council. The sums asked for included £15,000 for paving of streets, £10,000 for flagging footways, a similar sum to provide a refuse destructor, £30,000 to erect a public abattoir, £8,000 to erect a model lodging house for men, and £75,000 for electric lighting. Sir Samuel Black, the town clerk, stated that the loans, if granted, would certainly not cause any increase in the rates, and several of these enterprises would prove remunerative.

This is very satisfactory, and a project such as the abattoir, which must tend to improve sanitation, ought undoubtedly to be viewed with every commendation. The various works are all required, and the assurances of Sir Samuel Black are exceedingly gratifying.

**Birr and Portumna Railway.**—This was opened about thirty years ago at a cost of over £90,000, worked for a little while in hap-hazard fashion, and then allowed to be derelict until the people of the district began to help themselves to bolts, screws, rails, sleepers, etc., until scarcely a vestige of the line was left. The station at Portumna Bridge disappeared in a single night. During the amalgamation inquiry the Government promised to hand over £12,000 for the re-equipment of the 12½ miles of line to some eminent contractor. It has now been asked in Parliament whether the Government are still prepared to hand over the amount or advance still further a sum of £6,000. The estimate of Mr. Thos. S. Irwin, C.E., is £23,000 for re-constructing the railway.

**Blackrock.**—A deputation from the Blackrock Urban Council will wait on the Dublin, Wicklow, and Wexford Railway to propose that the Company shall build a bridge over the railway at Idrone Terrace, the Council to pay £2,000 towards the cost of the work. Mr. Price is the engineer, and he estimates the total cost will be £3,580.

**Cork, Blackrock & Passage Railway.**—The Crosshaven extension works of this railway are being substantially executed, and will be completed by next March. Tenders will be immediately invited for the conversion of the existing gauge, and if these are not satisfactory the Company will undertake the execution with their own staff.

**Crosshaven.**—The Kinsale District Council have under consideration the question of a water supply for Crosshaven, and inquiries are now being made as to guarantees.

**Donegal Railways.**—The Strabane to Londonderry extension of the Donegal Railway will probably be completed early next year, and this, with the completion of two similar schemes of railway extension in the northern portion of Donegal, will be of far-reaching importance to Londonderry.

The new line between Carndonagh and Buncrana (18½ miles), connecting the Innishowen peninsula with Derry, is well advanced. Messrs. Pauling and Co., of Westminster, are the contractors.

**Dublin.**—It is contemplated to construct a new jetty at North Wall by the Port and Docks Board, the cost being reckoned at £6,400.

Mr. Griffith, C.E., has estimated that the new dredging plant for the Port and Docks Board would cost £43,800. There are now twenty feet of water at lowest tide.

It is probable that the once prosperous shipbuilding industry will soon be revived in Dublin. It is stated that a Liverpool firm is meditating the purchase of the lease of the Bewley shipbuilding yard, which is about to be sold, but it contains some restrictive clauses.

The gross income of the Electric Lighting Committee of the Dublin Corporation for 1898 amounted to £11,915 10s. 6d., while the expenditure charged against that income was only £8,142 5s. 3d. In other words, the working of the system, so far as it was carried up to the end of the year, resulted in a profit of £4,000, or 5 per cent. If the necessary initial expenditure on plant and machinery were once provided for, a handsome revenue for the city should be obtained out of the electric lighting experiment, and the Corporation ought to go ahead with the extension of the system.

**Dublin, Wicklow, and Wexford Railway.**—It is intended to replace the iron rails with steel ones on four miles of this railway, the remainder having been already completed. Retaining walls, piles, and groynes will also be constructed between Killiney and Wicklow.

Extensions are in contemplation at Bray station, and the Royal Marine Hotel there will be renovated and improved by the Company.

Orders have been given to the contractors to proceed with the Waterford extension, estimated at £150,000.

**Dundalk.**—The Town Board are considering the advisability of a scheme for electric lighting, and a sum of £70,000 is mentioned.

**Drumcondra.**—The District Council invited tenders from contractors for the following works—Constructing 10,000 square yards of concrete footpaths, 5,000 lineal yards of kerbing for ditto, 5,000 lineal yards of other kerbing, and 1,000 square yards of stone setts for crossings.

**Parsonstown.**—The Urban Council of Parsonstown intend constructing waterworks for the town. The supply will also be laid on to Birr Barracks. The population to be supplied is about 6,250, and the scheme of supply is high pressure. The engineers selected by the Council were the well-known firm of Messrs. L. L. Macassey and Sons, Chichester street, Belfast.

## LAW CASES.

**A Boundary Wall.**—In the Southern Police Court, Dublin, before Mr. Swifte, Mr. John Behan, Dame-street, and Mr. C. Moore, the agent for the house occupied by Messrs. Henry and James, were summoned by the Corporation for not taking down the boundary wall between the two houses, as it was in a dangerous condition.

Mr. Rice stated that the only difficulty in the case would be to determine whether Mr. Behan or Mr. Moore was the owner of the wall.

Mr. Wilson, Inspector of dangerous buildings for the Corporation, gave evidence that the wall was dangerous.

Mr. Miley said his client was willing to pay half the expense of taking down the wall if the other side would pay the other half.

Mr. Wilson said that Mr. Moore built over the frontage wall, and therefore they must be responsible for it.

In reply to Mr. Poole, Mr. Wilson said if the wall collapsed Mr. Moore's house might come down also.

Mr. Miley asked if Mr. Poole was prepared to admit that the wall was Mr. Behan's property, in which case he (Mr. Miley) was willing to have an order made against him.

Mr. Poole agreed to this, subject to any easement his client might have over the wall.

Mr. Swifte accordingly made an order that Mr. Behan should take down the wall.

**A Point of Sanitary Law.**—Some time since two summonses were issued at the suit of the Corporation of Dublin against several persons who were occupants of a single tenement house for allowing a sanitary convenience, used in common by them, to become a nuisance for want of proper cleansing.

Under the Public Health Amendment Act, 1890, s. 21, ss. 2, it was contended, on behalf of the Corporation, that the occupiers of the separate rooms in the one house were "occupiers of two or more separate dwelling-houses" within the meaning of that enactment, and were, therefore, bound to abate the nuisance. The Court refused to adopt this contention, holding that the occupiers in question were not occupiers of two or more dwelling-houses, and that the Act of Parliament only applied to persons living in physically distinct houses, and using a sanitary convenience in common. (See *Irish Law Times' Reports*, vol. 33, page 143.)

The closing words of the Chief Baron, in giving judgment, are significant. "The Corporation," he said, "having now got the decision of this Court upon the subject, can proceed to get statutory powers with regard to nuisances of

this kind, but I am not to be taken as saying that there are no such powers already in existence, for our consideration has only been directed to this particular section." It thus appears to be doubtful whether there is any remedy when a sanitary convenience used in common by the inhabitants of one tenement house is allowed to become a nuisance, and, of course, what applies to Dublin in this respect applies to all other sanitary districts also.

## THE ARCHITECTURAL ASSOCIATION.

### ANNUAL EXCURSION.

The Thirteenth Annual Excursion of the Architectural Association began on Monday, 31st July, and was favoured with tropical weather. Salisbury was selected as the headquarters. As the heart of a charming district with plenty of good work all around, and Salisbury itself so many features of interest, it would be difficult to improve on the selection of such a centre. Coming after such a phenomenally successful excursion as the Leamington tour of 1898, this is the more remarkable. Most of the members arrived as usual on Saturday and Sunday, and on the latter day unofficial outings were planned, to Clarendon of historic memory, where there were some remains of the ancient castle; others of the party visited Stonehenge, while one or two went further afield and visited Downton (where there is an interesting parish church), and on to Romsey Abbey.

On Monday the party had assembled in force, though somewhat less than the usual muster, several well-known faces being missing, though most of them joined in the course of the week.

Wardour Castle was the next stopping place. The castle is only a ruin, but an interesting one. A peculiar type of plan round an octagonal courtyard, afterwards covered in, and some good remains and detail, are the chief characteristics of the place besides its picturesque surroundings. It is remarkable as the scene of one of the most stirring incidents of the Cromwellian wars; the dramatic and thrilling defence of the Castle for the King, by Lady Blanche Arundel.

The modern Wardour castle was next visited. It is a large house dating from the end of the last century. There is little of interest save the octagonal hall and staircase, of which the detail is particularly refined. The chapel, chiefly the work of Wyatt, is a mediocre and somewhat garish performance of the Jesuitical type of Classic

On Tuesday Mere Church was visited for a start. The church is interesting and the restoration has been sparing. It contains some 17th Century Gothic, unobjectionable enough considering the period. The roofs of naves and aisles are good examples of the Perpendicular period and show some traces of the old decoration; generally speaking the district is poor in its roofs. There is a very ancient example of a timber porch at the west end, one of the oldest we remember to have seen.

The next stopping place was Woodlands, now a very picturesque farmhouse. The chapel is good. It is now used as a storeroom for cheeses, and there are a couple of good fireplaces of later date.

A lengthened stop at Motcombe, the seat of Lord Stalbridge, completed a good days' programme. Motcombe is a modern house designed by Mr. Ernest George. The members were fortunate this year in the modern work seen; then the opportunity of comparison of the work of the two architects, Ernest George and Norman Shaw.

Stratford-sub-Castle was the place first visited on Wednesday. The church, vicarage, and Inn, are all interesting, but most of the members devoted themselves to the church. The use of a flint and stone combination is a feature of the district. The chancel, screen, pulpit, and

bench ends are all good, and the church itself worthy of a longer stay.

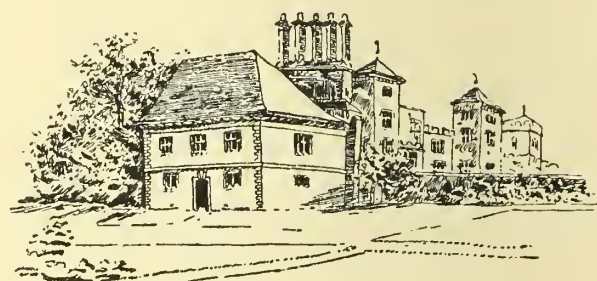
Lake House is a delightful old gabled structure, lately in a state of dilapidation, which has recently been most conscientiously restored under the direction of Mr. Detmar Blow, architect, but by no means in the conventional meaning of that questionable term.

Wilton, the seat of the Earl of Pembroke, was the last stopping place for the day. The superb Palladian bridge over the river was the admiration of all. The house itself is of many and varied periods. Inigo Jones, William Chambers, and the destructive Wyatt, all had a hand in its realisation. The garden is a stately piece of English renaissance. The interior of the house is notable for its unique collection of sculpture and for the pictures.

On Thursday, Hanford House, the residence of Mrs. Livingston, Lymington, proved one of the most interesting features of the whole excursion. A notable feature is the internal courtyard, which has been covered in and forms the hall of the house, which is chiefly of fifteenth and sixteenth century date. Bryanstown House, the residence of the Lord Viscount Portman, is a modern mansion in the later manner of Mr. Norman Shaw. The exterior is distinctly severe and perhaps heavy, but the interior is a masterpiece of planning and detail. Lord Portman personally received the visitors and showed them over the house. A church, by Mr. E. Privleau Warren, situate within the grounds and built by Lord Portman is a gem of the best type of modern ecclesiastical design.

Blandford was next visited, where the party, under the guidance of Dr. Daniel, briefly viewed the town, and a very interesting brick house of a Dutch type, the residence of Mr. Masters.

Friday, the last day of active work, was about the best day of the week, Cranbourne, from which the second title of the Salisbury Cecils is taken, being the first stopping place.



CRANBOURNE.

R. M. BUTLER  
AUG. 1899

Cranbourne Manor House is one of the most delightful houses imaginable. Examples of the work of John Thorpe and Inigo Jones all go to the making of an architectural picture, typical of the most picturesque form of early renaissance architecture in England. The church, chiefly Perpendicular in style, has a very fine tower, and is one of the finest parish churches in Dorsetshire.

A considerable portion of the afternoon was cut into by the long drive to Longford House, the stately seat of the Earl of Radnor. Here more of the work of John Thorpe is to be seen, but the vandal hand of Wyatt has despoiled it of much of its interest.

In the evening the customary dinner was held, followed by the usual toasts of the Queen, the Secretaries, the President, and the Visitors, the Irish contingent being singled out for special welcome. Mr. H. Noblelett replied on their behalf.

Saturday was devoted to Salisbury itself, the grand cathedral with its peerless spire, and the fine church of St. Thomas being viewed. Some interesting Georgian houses were visited under the guidance of Mr. E. Doran Webb, architect. This brought a most pleasant excursion to a close, much to the regret of all.

## THE ARCHITECTURAL ASSOCIATION OF IRELAND.

### VISIT TO POWERSCOURT HOUSE, ENNISKERRY.

On Saturday, the 2nd instant, a party of the members journeyed down to Bray, where brakes were in waiting.

Arriving at Powerscourt, the members were received by Lord Powerscourt, who conducted them over every part of the house and grounds with the beautiful terraces designed by Mr. Penrose.

Of Powerscourt House itself the history is more or less obscured, as the manner and character of the castle which formerly occupied the site little or nothing is known, all the family records having been destroyed in a fire which took place long since. The entrance facade is of that fine type of the English Renaissance which flourished so brilliantly and so briefly in Ireland during the latter half of the eighteenth century, an epoch which gave us not only the fine works of Gaudony, Cooley, Cassels, Sir William Chambers, and several others, but a standard in design which has, unfortunately, not been maintained. It was, in fact the Augustan era of architecture in this country, if we may be pardoned the use of an expression which smacks a little of mixed metaphor. The facade we refer to is by far the finer, consisting of a fine dignified central mass and two flanking gateways, boldly dignified and planned on a curving sweep. Inside, the house is a good example of the detail of the period, the entrance hall having a modelled plaster ornamentation of a character more quaint than actually beautiful. All the rooms are pleasing and nicely proportioned, those on the terrace commanding magnificent views, but the great charm and interest of the interior is the fine collection of pictures, statuary and other works of art, gathered together during the travels in many lands of the present and former Lords Powerscourt. The whole house and its treasures of art afford evidence that the patronage of art is hereditary and traditional in the family of Wingfield. The pictures, although not a great collection when compared with some of the magnificent private galleries of England, such as that of Longford Castle, yet include examples of many of the best masters, and are notably strong in paintings of the Dutch School. The house has been from time to time added to, but judiciously and in a reticent manner. The garden front is plain but dignified, though the large sheets of plate glass detract somewhat from the character of a fine front. The gardens and grounds are charmingly laid out and planted, and contain many fine pieces of statuary, and several good examples of old iron-work.

The main portion of the House is generally attributed to Cassels, who was also the architect of the Houses of Parliament, Leinster House, and the dining hall of Trinity College. The latter building has, however, always appeared to us to be of earlier date than Cassel's time, and Mr. Mac Vicar Anderson, Sir T. Deane, and Mr. Thomas Drew, R.H.A., have been concerned in various alterations and additions to it. The garden terraces were designed by Mr. Penrose.

The chief apartment of the house is the finely proportioned saloon, very rich in its detail, and containing a superb Florentine mantelpiece, with old Italian iron dogs and irons, very quaint and curious, brought from Venice by Lord Powerscourt. Most of the mantelpieces throughout the house are very beautiful, and are chiefly collected from old Dublin mansions. The saloon has a fine series of mural decorations by the talented and promising artist, the late Honourable Lewis Wingfield, a brother of the present Viscount, who died some few years since, just when he

had attained a high rank in the world of art. Most of these paintings are very spirited and clever in colour and in drawing. In this room many notable personages have been guests. Here His Majesty King George IV. was entertained when he visited Ireland, a temporary annex being erected as a supper room where the terrace now is. More recently their Royal Highnesses, the Duke and Duchess of York visited Powerscourt on the occasion of their last visit to Ireland.

Before leaving, the members were most hospitably received by Lord Powerscourt, who placed the association under a very great obligation by the kind and hearty welcome which he extended to the party, and by the considerable amount of time he devoted to making the visit one of practical utility as well as pleasant.

## STATUES AND MEMORIALS.

**Father Murphy Memorial.**—It is proposed to put up a memorial at Arklow, Co. Wicklow, to Father Murphy.

**Parnell Statue.**—The proprietor of the Parnell Quarries has been written to with the view of getting the foundation stone, and a site has been selected at the head of O'Connell street, near the Rotunda, Dublin.

**Manchester Memorial.**—A memorial is to be erected in Manchester to the Irishmen, Allen, Larkin, and O'Brien. The stone, which will form part of the base, is in the hands of Mr. Hawthorne, the sculptor, of Castlereagh.

**Statues for Youghal Church.**—Two beautiful statues have just been presented to Youghal Church, Nenagh. One represents the Sacred Heart, and the other the Immaculate Conception. The latter will be placed on a fine altar, which is in course of erection at Bull's, Dublin.

**Fountain at Mountrath.**—In connection with the water supply scheme at Mountrath, Queen's County, recently presented by Sir Algernon Coote, Bart., a handsome central fountain was also erected. It is constructed of Connemara marble, the drinking trough is of Connemara granite, and the whole stands on a case of Wicklow marble. Mr. Wm. J. Haslam, M.A., B.E., M.I.C.E., was the designer of the whole scheme.

**Dundalk Memorial.**—The Dundalk '98 Centenary Memorial has now been practically completed, by Mr. H. G. Barnes, the sculptor. The statue which surmounts the monument is a graceful and striking work of art, and the carving and lettering on the pedestal are finished. Father Kavanagh, author of the "History of the Insurrection of 1798," will unveil the memorial on the 17th instant. The cost will be some £300.

**Sligo Memorial.**—The Sligo Memorial to the men of '98 was unveiled on the 3rd instant. It is erected in the centre of the town at the Market Cross, and takes the form of a figure of Erin carved in Sicilian marble, holding a half-mast flag in the left hand and standing on broken chains. The pedestal is of chiselled limestone, and on the four sides are tablets for inscriptions. The memorial, which is 16ft. high, has a very fine effect, and the finish of the work reflects much credit on the sculptors, Messrs. Harrison and Sons, Dublin, as well as on the contractor, Mr. John Clarence, of Ballisodare. The cost will be considerably over £200.

**A Town Surveyor** is required by the Bangor Urban District Council.

**Thomas Dockrell, Sons, and Co., Limited**, the well-known firm of Dublin builders' ironmongers, report that their profits for the year ending 30th June, last, amounted to over £9,736.

**The Belfast Building Trade** is equally good, and there are several large jobs in prospect. The consumption of timber, in particular, is steadily increasing.

**Fine beds of Clay** for brick-making are situate in Ireland, and comprise some 3,000,000 tons of clay. We can put anyone into communication with the owner of this property.

## OUR LONDON LETTER.

**Architecture for Women.**—Architecture as a profession for women has made far greater strides in the United States than is the case in the old country, and it is stated that a lady, Mrs. Frank H. Fuller, who obtained third place in the competition for designs for the Women's Building at the World's Fair, has been appointed architect of a similar erection at the Illinois State Fair. In this latter place the registration, or as it is called, the licensing of architects, is in full swing, and with an eye to future developments the framers of the Act, by inserting the words "he or she" in its clauses, clearly anticipated the advent of the lady architect, and in doing so were wise in their generation, for she has come and evidently means to stay.

**Sanitary Institute Congress.**—Mr. White Wallis may well congratulate himself on the success of the Sanitary Institute Congress at Southampton, which has just closed. The Presidential Address was delivered by Sir William Preece, K.C.B., and was followed by many other papers and addresses. Those given by Mr. Thomas Blashill, F.R.I.B.A., late architect to the L. C. C., on "Unhealthy Areas and Municipal Re-housing"; Mr. W. Henman, F.R.I.B.A., on "Developments in Hospital Planning"; and Mr. C. J. Hair on "The Housing of the Working Classes," being perhaps most acceptable to members of the architectural profession who were present.

The smoke abatement question also received consideration, two papers being devoted to it, and it is evident that the movement of which Sir W. B. Richardson is the head, is attracting much public attention, and the recently formed Coal Smoke Abatement Society has quickly justified its formation.

A well-organised Health Exhibition was an attraction, while apart from the facilities afforded by this and other sections of the Congress for obtaining practical information as to the most recent sanitary developments, the visitors were well catered for in the means provided for exploring the beauties of the surrounding country, and everything possible was done to enable them to combine profit and pleasure.

**Westminster Cathedral.**—The work of erecting the new Roman Catholic Cathedral at Westminster is being pushed on, and the workmen are already striking the centring of one of the large concrete domes.

The building, which is from designs by Mr. John F. Bentley, takes the form of a basilica, the style being Byzantine. The feature of the interior will be the enormous nave which will presently accommodate a larger congregation than any English Cathedral, while the exterior, with its high square tower, four great domes, and smaller towers surmounted by minarets, will present a unique picture.

**Stonehenge.**—The "booming" of Salisbury Plain consequent on the purchase by the Government of land in the vicinity was too good an opportunity to be lost by the owner of Stonehenge and its surroundings endeavouring to turn the historic spot to good account from a commercial point of view and at the same time of securing to the nation a relic of value as a page of history, for though the offer of Sir Edward Antrobus can hardly be regarded as a disinterested one, yet there is no doubt that the proper guardian of a monument of this kind is the nation.

Signs are not wanting that some steps must eventually be taken to protect the ruins from the action of the weather if they are to be preserved in their present form, and it is suggested that a belt of plantations would effect this purpose without in any way detracting from their impressiveness. However, this may be, it is pretty certain that private enterprise will not be forthcoming in this respect, but there should be no great difficulty in naming a price which both the Government and the owner would consider reasonable and which would enable the nation to exercise that guardianship over the spot by which alone its associations

and form can be preserved intact. But the Government is not likely to take any steps in the matter at the price now put upon it.

**Society of Architects.**—The Society of Architects will hold an examination in Architecture and Building Construction on October 11th, 12th and 13th, at St. James's Hall, Piccadilly. Gold and silver medals, etc., are offered for competition, and certain alternative examinations are accepted in lieu of some of the sections. The latest date for entering is September 20th.

**Architectural Association.**—The Architectural Association commence their next session on October 9th, the Presidential Address being delivered three days earlier, and perhaps are to be read every fortnight, the lecturers being the same as last year. The list of subjects is a very wide and interesting one, and there is every reason to anticipate a successful session.

## OPINIONS OF THE PRESS.

The reception given to the first number of the new series of the *Irish Builder* by the Home Press has been most flattering, and we sincerely thank our contemporaries for their kind remarks. Space will not permit us to publish all the favourable notices we have received, but with this issue we append a few.

**The Irish Times.**—The issue of the *Irish Builder and Technical Journal* for September 1st sees the paper launched on a new career, under new management and the brightest auspices. Originally appearing as the *Dublin Builder*, and then as the *Irish Builder*, this journal has long and successfully catered for Irish craftsmen; and if to-day it has no rivals in Ireland as a paper devoted to technical matters, this may have its explanation in the excellent manner in which it has been managed, and the "up-to-dateness" of its contents. As the only technical journal in Ireland, it ought to command an ever-increasing number of readers; and its merits will, doubtless compel a greater success than has been associated with it in the past. As to the contents. A prominent place is given to an article which engineers will read with interest, on Irish materials used in Road-making; and under "Classic details and their application" will be found an able paper on Corinthian architecture.

**The Daily Nation.**—A well-produced technical journal is the *Irish Builder*, a bi-monthly devoted to architecture, archæology, engineering, and sanitation. With the current issue is given as a supplement a sketch of the new building for the Scottish Provident Institution, Belfast. The *Irish Builder* is the only journal of its class published in Ireland.

**The Irish County Councils Gazette.**—The current number of the "Irish Builder" is a decided advance on its predecessors, and its proprietors are evidently determined to make it as useful and instructive as possible to all who are interested in Irish arts and industries. The "Irish Builder" is the only technical journal in Ireland, and is a persistent advocate of native arts, industries, and handicrafts. Every number contains several special articles by authorities on the subject treated. Amongst those in the present number is one entitled "Irish Materials used in Road-making and other Municipal Work," by Mr. Munce, A.M.I.C.E., assistant city surveyor of Belfast. It is one which deserves the special attention of County Councils. Mr. Middleton writes on "Classic Details of Architecture and their Application." His article is illustrated. "Annals of Monks-town and Some Neighbouring Parishes in the County of Dublin," are dealt with by Mr. F. Elrington Ball, M.R.I.A., F.R.S.A.I. A large full page illustration of the new buildings for the Scottish Provident Institution, Belfast, is given, as well as a smaller illustration of the new Masonic Hall, Donaghadee. The general information is, as usual, varied and interesting.

**Belfast News Letter.**—"The Irish Builder" appears as a new issue. It claims to be the only technical journal in Ireland. The editor promises that no effort will be spared to make it a thoroughly up-to-date publication. It contains a great deal that is interesting to the building trade, accompanied by several illustrations, and a supplement giving a picture of the new buildings of the Scottish Provident Institution, Belfast. The office is 13 Fleet Street, Dublin.

**Derry Journal.**—We notice with pleasure that *The Irish Builder* appears in a new garb, rejuvenated, and altogether improved in its appearance. As has been said, there is great

scope for a technical paper in Ireland which will encourage native industries, arts, and handicrafts. *The Irish Builder* in its present form cannot fail to meet a demand for such a publication. The contents are varied and most interesting.

**Constabulary Gazette.**—The *Irish Builder* is a journal which was allowed to decline. It has now changed proprietorship, and is in the hands of one of the ablest and most energetic men in the country. Every person interested in any way in house property will find it to his benefit to consult the Editor of this paper. He can give tips in most things, from the manufacture of a brick to the building or buying of a mansion.

## MARKET PRICES.

### OILS AND PAINTS.

		£ s. d.	£ s. d.
Colza Oil, English .. ..	per cwt.	1 4 6	—
Copperas .. ..	per ton	2 0 0	—
Linseed Oil .. ..	per cwt.	1 1 3	1 1 6
Neatsfoot Oil .. ..	per gal.	0 2 6	0 4 0
Pitch .. ..	per barrel	0 8 0	0 8 6
Tallow, Town .. ..	per cwt.	1 5 6	1 7 6
Tar, Stockholm .. ..	per barrel	1 5 6	1 6 0
Turpentine .. ..	per cwt.	1 14 0	—
Glue .. ..	..	1 14 0	2 18 6
Lead, white, ground, carbonate ..	..	0 19 0	—
Do. red .. ..	..	0 17 3	—
Soda crystals .. ..	per ton	2 15 0	—
Shellac, orange .. ..	per cwt.	3 4 0	3 5 0
Do. sticklac .. ..	..	2 2 6	2 15 0
Pumice stone .. ..	..	0 8 9	—

### METALS.

Copper, sheet, strong .. ..	per ton	88 0 0	—
Iron, bar, Staffs. in London ..	..	8 10 0	9 1 0
Do. Galvanised Corrugated sheet .. ..	..	14 0 0	—
Lead, pig, Spanish .. ..	..	15 0 0	—
Do. English common brands ..	..	15 5 0	—
Do. sheet, English, 6lb per sq ft. and upwards ..	..	16 10 0	—
Do. pipe .. ..	..	17 5 0	—
Nails, cut clasp, 3 in. to 6 in. ..	..	9 0 0	10 0 0
Do. floor brads .. ..	..	8 15 0	9 15 0
Tin, Foreign .. ..	..	142 15 0	143 5 0
Do. English ingots .. ..	..	146 10 0	—
Zinc, sheets, English .. ..	..	140 0 0	28 10 0
Do. Veille Montaigne .. ..	..	31 0 0	—
Do. Spelter .. ..	..	23 2 6	23 7 6

### TIMBER. SOFT WOODS.

Fir, Dantzic and Memel .. ..	per load	3 0 0	4 0 0
Pine, Quebec Yellow .. ..	..	4 7 6	6 5 0
Laths, log, Dantzic .. ..	per fath.	4 10 0	5 10 0
Do. Petersburg .. ..	..	4 0 0	6 10 0
Deals, Archangel 2nd and 1st ..	per P. Std	15 10 0	20 5 0
Do. do. 4th & 3rd .. ..	..	12 0 0	12 5 0
Do. do. unsorted .. ..	..	12 5 0	—
Do. Riga .. ..	..	6 15 0	8 10 0
Do. Petersburg 1st Yellow ..	..	10 10 0	16 0 0
Do. do. 2nd do. .. ..	..	10 10 0	12 0 0
Do. do. Unsorted do. ..	..	8 10 0	10 15 0

Do. do. White .. ..	..	7 15 0	11 5 0
Do. Swedish .. ..	..	9 5 0	16 10 0
Do. White Sea .. ..	..	13 0 0	—
Do. Quebec, Pine, 1st .. ..	..	20 0 0	23 15 0
Do. do. 2nd .. ..	..	13 15 0	15 15 0
Do. do. 3rd, &c. .. ..	..	7 15 0	9 15 0
Do. Canadian Spruce, 1st ..	..	9 0 0	10 5 0
Do. do. 3rd & 2nd .. ..	..	6 5 0	7 15 0
Do. New Brunswick .. ..	..	7 5 0	8 0 0
Battens, all kinds .. ..	..	6 10 0	9 10 0
Flooring Boards, 1 in. prepared, 1st .. ..	per square	0 9 9	—
Do. 2nd .. ..	..	0 8 6	0 9 6
Do. 3rd, &c. .. ..	..	0 8 0	0 8 3

### HARD WOODS.

Ash, Quebec .. ..	per load	3 17 6	4 10 0
Birch, Quebec .. ..	..	3 12 6	3 17 6
Box, Turkey .. ..	per ton	7 0 0	15 0 0
Cedar, lin., Cuba .. ..	per ft. sup.	0 0 4	0 0 4½
Do. Honduras .. ..	..	0 0 3½	—
Do. Tobasco .. ..	..	0 0 4½	0 0 5½
Elm, Quebec .. ..	per load	4 12 6	5 10 0
Mahogany, Average Price for Cargo, Honduras ..	per ft. sup.	0 0 5 29/32	—
Do. African .. ..	..	0 0 4 7/16	—
Do. St. Domingo .. ..	..	0 0 5¼	—
Do. Tobasco .. ..	..	0 0 4 15/16-6 1/3	—
Oak, Dantzic and Memel .. ..	per load	3 5 0	3 5 0
Do. Quebec .. ..	..	4 12 6	5 0 0
Teak, Rangoon, planks .. ..	..	9 5 0	15 10 0
Wainscot, Riga (Baulk) .. ..	..	3 15 0	5 15 0
Do. Odessa Crown .. ..	..	3 15 0	5 15 0
Walnut, American .. ..	per cnb. ft.	0 2 6	0 4 3

## BREVITIES.

An Engineer is wanted by the Castlereagh, and by the Clones, Rural District Councils.

The Garrick Council have elected Mr. E. A. Hackett, Connty Surveyor, as their engineer.

The death is announced of Mr. Joseph Fogerty, M.I.C.E., M.R.I.B.A., at Enderby, Sydenham, on September 2nd.

Electric Trams are to be introduced into Limerick at a cost of £67,000. Mr. Fuller, C.E., is the engineer.

The Dublin Building Trade shows no sign of a decrease in activity, and business keeps very brisk.

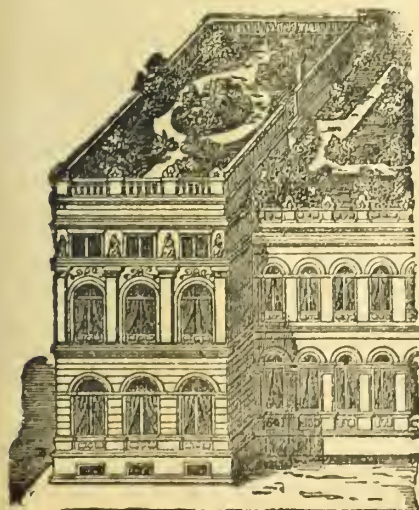
Models of Guinness' Brewery are to be exhibited at the Paris Exhibition of 1900.

The Borrisokane Council have appointed Mr. R. P. Gill, C.E., as engineer for carrying out the proposed scheme of building dwellings under the Labourers' Acts.

The District Asylums in Ireland number twenty-three, and cost on an average £10,000 per annum, per asylum, or £15 per head per annum, for upkeep.

The Main Drainage Outfall Works for Dublin will cost about £95,000. It is believed that the successful contractors are an English firm, but we have not yet heard the name.

The Waterford Corporation have appointed Mr. John Fleming as assistant surveyor for the carrying out of the sewage scheme for the city, at a salary of £208 a year. There were seven other candidates.



# Patent Vulcanite Roofing

Since the introduction of the Patent Vulcanite Roofing into this country it has been adopted by a great number of Leading Architects for Public and Private Buildings, Hotels, Schools, Hospitals, Theatres, Mills, Warehouses, Breweries, Shops, Villas, Dwelling Houses, &c.

The Temperature of the Rooms immediately beneath the Vulcanite Roof is more even in winter and summer than under any other Roof. When properly laid repairs are never required, and all Roofs are guaranteed. The Roof Surface can be used as a Garden, or for any other purpose. The cost of construction is even less than for a Slate or Tiled Roof. Lowest Rate of Insurance. More Fireproof than Slated Roofs.

## Sheet Asphalte For DAMPCOURSE, WATERPROOFING VAULTS, BRIDGES, TUNNELS, ETC.

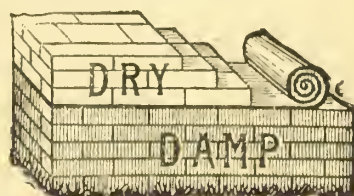
Is manufactured ready for use in lengths of 40ft. and any width up to 40in., being more convenient than the usual slabs. Price lower, and quality much superior than any similar article in the market.

Full Particulars, Catalogues, Detail Sketches, Estimates and Samples

The Patent Vulcanite Roofing & Asphalte Co., Ltd.  
LACANVALE, BELFAST & OLD FORD BOW, LONDON, E.

From North of England, Scotland and Ireland, please address to Belfast.

Agents wanted where not yet represented for the laying of Vulcanite Roofs and sale of Sheet Asphalte.





## NAVAN UNION.

### NOTICE TO CONTRACTORS.

**T**HE BOARD OF GUARDIANS of the above Union will, on Wednesday, the 20th day of September, 1899, proceed to consider

### TENDERS

For Supplying and Fitting up Steam Boiler, Steam Clothes Boiler, and Hot Water Circulating Tank in the Laundry of the Workhouse, According to Plan and Specification which can be inspected on application to the Guardians' Architect, Mr. A. Scott, Ludlow Street, Navan.

Sealed Tenders containing the names of Two Solvent Sureties for each sum as may be fixed by the Guardians, for the due performance of the Contract, may be dropped into the Tender-box at the Board-room, up to the hour of 12 o'clock, noon, on the above-named day. The Guardians do not bind themselves to accept the lowest or any tender. For further particulars apply at this Office.

Printed Forms of Tender can be had on application at this Office, and none other will receive attention.

By Order,

CHARLES LACY,  
Clerk of the Union.

Board-room, 6th September, 1899.

Special Advantages to Private Insurers.

## IMPERIAL INSURANCE CO., LIMITED, FIRE. Est 1803.

Subscribed Capital, £1,200,000. Paid up, £300,000.

Total Invested Funds, £1,500,000.

Fire Insurances effected at the lowest current rates.

Losses Promptly and Liberally Settled.

Agents—Messrs. P. ASKIN & SON,  
60 Upper Sackville Street, Dublin.

## DEPARTMENT OF SCIENCE AND ART,

ROYAL COLLEGE OF SCIENCE FOR IRELAND.

The Session 1899-1900 commences on TUESDAY, OCTOBER 3rd. Diplomas of Associateship are given in the Faculties of Manufactures (Chemical); Engineering, Mining, Applied Physics, (for Electrical Engineers, etc.), and Natural Science.

Two Royal Scholarships are competed for at the end of the first year, giving Free Admission to all the Courses for the two following years and an allowance of £50 per annum.

The Courses of Chemistry, Physics, Botany, Zoology, Geology, and Mineralogy, qualify for the Examinations, at the Royal University (Ireland) and elsewhere; Certificates are granted to Medical, Pharmaceutical, and other Students for Special Courses.

The Chemical, Physical, Botanical Geological, and Mineralogical Laboratories open for Practical Work.

Chairs:—

### PROFESSORS.

Physics.....W. F. BARRETT, F.R.S., M.R.I.A.  
Chemistry.....W. N. HARTLEY, F.R.S., F.C.S., F.R.S.E.  
Zoology.....A. C. HADDON, M.A., D. Sc., F.R.S., F.Z.S.  
Botany.....T. JOHNSON, D. Sc., F.L.S., M.R.I.A.  
Geology and Mineralogy...GRENVILLE A. J. COLE, M.R.I.A., F.G.S.  
Applied Mathematics and Mechanism...W. MCFADDEN ORR, M.A.  
Descriptive Geometry and Engineering.....JAMES LYON, M.A.

Fees for Associates from £14 to £22 per Session, according to the Faculty and Year. Non-Associate, Free-Lectures, £2 per Course (Mathematics), Laboratory Fees, from £2 upwards.

NOTE.—The Entrance Examination for the three years' Associate Course will be held on the first day of the Session, TUESDAY, OCTOBER the 3rd. Candidates should send in their names at once.

ALL COURSES ARE OPEN TO LADIES.

The College Directory, giving full information, can be had free on application to the SECRETARY.

### APPOINTMENTS OPEN.

Appointment	To whom	Salary	Last date
Superintendent of Roads ... ..	Vestry of St. John, Hampstead ... ..	£2 2s. per week .. ..	September 21st
Clerk of Works .. ..	Board of Guardians, Drogheda ... ..	£120 per annum .. ..	" "
Valuer and Surveyor, Valuation Office, Ireland ... ..	Civil Service Commission, London, S.W.	£120 to £450 per annum .. ..	October 12th
Sanitary Sub-Officer .. ..	Bray District Council ... ..	£52 per annum .. ..	—

### COMPETITIONS OPEN.

Design	Advertised by	Premium	Last date
Savings Bank, Norwich ... ..	Secretary C.E.Y.M.S., Rooms, Norwich	50 gns., 20 gns., and 10 gns. ... ..	September 16th
Sewerage and Water Supply, Hay ... ..	C. Griffiths, Clerk, Hay, Brecknock ... ..	£25 ... ..	" 25th
Designs in Tunbridge Wells ... ..	The Town Clerk, Tunbridge Wells ... ..	3 gns., 2 gns., and 1 guinea ... ..	" 30th
Court House, and Police Buildings ... ..	County Clerk, Dunoon, N.B.	£30 and £20 ... ..	" 30th
School for 1,000 children, Blackpool ... ..	Clerk to School Board, Town Hall, Blackpool ... ..	— — — — —	October 17th

### CONTRACTS OPEN.

Work	For whom	Apply to	Last date
Drains at Milestown and Castlebellingham	Ardee No. 1 Rural District Council ... ..	Clerk of Council, Ardee Workhouse	September 19th
Working Class Dwellings, Dalkey ... ..	Urban District of Dalksey ... ..	Clerk to Council, Dalkey ... ..	" 20th
Hardware, Plumbing, Paints, Oils, Gravel, Sand, Stones, etc., for six months' supply	Richmond District Asylum ... ..	Chief Clerk, Richmond District Asylum .. ..	" 20th
Ironmongery, Manhole, Covers, Gully Traps, Sewer Pipes, Bricks, Cement, Timber, etc., for six months' supply ... ..	Blackrock Urban District Council ... ..	Secretary, Town Hall, Blackrock ... ..	" 29th
Heating and Ventilation of Sligo District Lunatic Asylum ... ..	Sligo District Lunatic Asylum .. ..	J. Petit, Resident Medical Superintendent, Sligo Asylum ... ..	October 3rd

## ROMAN CEMENT,

TELEPHONE No. 1500.

TELEGRAMS—Macara, Glasgow.

## HYDRAULIC LIME.

AS used by the Clyde Navigation Trustees, Glasgow Water Commissioners, Aberdeen Harbour Commissioners, and all the principal Scotch Railways  
Cheapest and Best Concreting Materials in the Market.

### HYDRAULIC PLASTER LIME.

FIRE-PROOF AND DAMP-PROOF. DURABLE AS THE WALLS. THE MOST CONVENIENT, THE STRONGEST AND MOST RELIABLE OF ALL PLASTERS.

Mastic, of Best Quality, in brls. 3 cwt. gross. Vulcan Cement for Steam Joints.

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WORKS & STORES—Kinning St., Clarence St., & Dundas St., Glasgow  
QUARRIES—Barrhead and East Kilbride.



**CIVIL SERVICE COMMISSION—Forthcoming Examination—Valuer and Surveyor (Second Section), Valuation Office, Ireland, (21-28) 12th October.**

The date specified is the latest at which applications can be received. They must be made on forms to be obtained, with particulars, from the Secretary, Civil Service Commission, London, S.W.

# The Irish Builder

A JOURNAL DEVOTED TO

ARCHITECTURE, \* ARCHÆOLOGY, \* ENGINEERING, \* SANITATION,

ARTS AND HANDICRAFTS.

1st & 15th of the Month.

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## NOTICES.

The *Irish Builder* is published twice a Month, on the 1st and 15th, and may be ordered from any Newsagent, or direct from the Offices—13 Fleet Street, Dublin.

It is the only technical journal in Ireland, and reaches Architects, Engineers, County Surveyors, Builders, Contractors, Artisans, Council Officials, Members of Trades Associations, and Public Libraries throughout the country. A specimen copy will be sent post free to any address on application.

Subscription (payable in advance), Town and Country,						post paid.		s.	d.
Yearly	...	...	...	...	...	8	0	8	0
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### Editorial.

Literary matter and drawings to be addressed to the *Editor*, and must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. We do not hold ourselves responsible for the opinions of correspondents.

Notes of works (especially contemplated works), contracts, reports, &c., are always welcome. Drawings and photographs are particularly acceptable.

### Publishing.

All business communications to be addressed to the *Manager*. Advertisements must reach the office two days before the date of publication. The charge for Contracts, Notices, Prospectuses, Competitions, &c., is 6d. per line. Other advertisement rates can be had on application.

### Payments.

Cheques and Postal Orders to be made payable to The Proprietor, *Irish Builder*.

We have been promised a very interesting series of articles on the Belfast Waterworks by Messrs. L. L. Macassey and Sons, the eminent firm of Belfast engineers, which we hope to publish shortly.

## COMMENTS.

### Arts and Crafts Exhibition.

On another page will be found a letter from the Arts and Crafts Society of Ireland, drawing attention to the fact that the forthcoming Arts and Crafts Exhibition will commence the week of the 19th of November. The Senate of the Royal University have granted the use of the same Halls as the Society occupied in 1895, and the Lord Lieutenant will open the Exhibition.

This Exhibition is without doubt one of the most important in Ireland, and it is just a collection of this sort which is productive of so much good, developing and promoting, as it does, Irish industries and crafts all over the country. It is upon the development of our industries that we must really look for the material progress of our country, and there is no reason why architects and builders should go to England for ironwork, bell-founding, stained glass, gesso and stucco, metal work, stone and marble carving, wood carving, etc., when we can obtain them just as well, and as beautifully designed, at home. Some of the old Irish work is lovely, and we have seen some excellent modern productions by home firms quite as fine, but unfortunately they are not brought to notice and so are little patronised. The Arts and Crafts Society are therefore doing a good work in bringing such collections together, and showing that the craftsman still lives, though he may not rule as in the old mediaeval days.

Look how beautiful some of our old Celtic work is. Think of the famous Book of Kells, with its wondrous art; our priceless manuscripts, with their fantastic drawings by the artistic hands of the much-leisured monks; our Celtic crosses, famous all the world over, and copied in every graveyard; our celebrated Celtic ornament, with interlacings so fine that it requires a magnifying-glass to trace many of the lines; our round towers and ancient abbeys, as well as many other classes of work. Are not these worthy of imitation, and should we not try to revive in our modern buildings much of the old-time art, so unique and so national. If we do not copy the old designs we can at any rate make our craftsmanship good and lasting, and suitable for every day use.

No charge is made for space in this Exhibition, and all exhibits will be insured against fire and burglary, so that

there is every inducement for exhibitors to come forward and make a worthy show. A strong Executive Committee has been formed, with Sub-committees, to look after the different sections and arrangements. We sincerely wish the Exhibition the highest and best success.

#### Made in England.

A correspondent has written to *Freeman's Journal* drawing attention to the paragraph in our last issue concerning the new Church of St. Saviour's at Arklow. He points out that the architect and builders were English, the bells, clock, mosaics, floor, reredos, etc., provided by English firms, and that a good deal of the stone also came from England. He then sarcastically asks if the congregation will be English, and if Arklow is really in Ireland.

Now we fully concur in this gentleman's opinions, and sympathise with him in his remarks as to the foreign character of such a fine building planted in our own soil. It is much to be regretted that Irishmen, and Irish industries, were not wholly employed, and at first sight it is difficult to assign a reason for their exclusion. Let us see if we can evolve any explanation from our own experience of Irish ways and methods. There certainly was no excuse for employing an English architect and builder, for we have many able men in Ireland, and of course local persons can look after local work far more satisfactorily than any stranger. But what about the firms of manufacturers? It is true that English firms are generally in a larger way of business than Irish ones, and with more extensive works and machinery can readily undercut our prices, even with the additional cost of freight. But we venture to say there is another reason, and that is, the Irishman's methods of business. Irish firms rely upon the old-fashioned way, and say, "We don't advertise," trusting to their connection to do everything. But this will not do in these days of competition, and we know a certain firm in the North of Ireland who are now forced to advertise and to have a commercial traveller, as they find English and Scotch travellers coming to Ireland and actually taking away the very customers of whom they ought to have a monopoly.

Here is another case for which we can vouch. An engineer, not thirty miles from Dublin, wrote simultaneously to an English and Dublin firm for a quotation for certain ironwork. The former promptly replied in two days, enclosing a handsome catalogue, with quotation. The latter (though only an hour distant by rail) did not answer for a week, and then said they did not print catalogues, and desired further information. Result: the English firm naturally got the order.

An architectural friend of ours wrote up from the Curragh to a Dublin firm of booksellers asking for the prices of certain technical books. They replied that they were large works, which he would find in the National Library! He perforce had to write to an English firm, who quickly sent him the volumes. We have known another Dublin firm of booksellers take over a week to obtain the Belfast Directory, and firms of printers leisurely require a month to give a small estimate for printing. Many other instances also occur to us. We do not wish to carp, but we venture to think a little more business energy and push would obtain orders for Ireland which now go across the Channel.

#### Architectural Association of Ireland.

It will be noticed that in this number we have devoted a special column to Jottings of the Architectural Association of Ireland. This will in future be one of the regular features of our journal, and the column will always be found at a glance by the heading of the official badge. The Association is about to start another Session of useful work, and we strongly recommend every architect's pupil and assistant to support it, not only by joining, but by their presence at the meetings. Some very good papers have been promised,

while the Saturday outings to various buildings give practical and pleasant instruction. We wish the Association a very prosperous winter's work. For readers who would like to join we may state that the address of the Secretary is 22 Clare Street, Dublin.

## THE DINING HALL, TRINITY COLLEGE, DUBLIN.

This is a very interesting old building of the last century from the design of a German named Richard Cassels, who settled as an architect in Ireland, and who is also responsible for several buildings of a similar type and style in and around Dublin. He is best known as the architect of the Houses of Parliament, and of Leinster House.

On the site of the present Hall there existed a building which was designed as a Dining Hall; but owing to the foundations having failed to a dangerous extent it was pulled down in 1755, very soon after its erection. This first building was carried out under the superintendence of the College bricklayer, whose name is peculiarly appropriate to his calling; he was a Mr. Plummer.

After the demolition Cassels' advice was sought by the College authorities, and the present building was erected from his plans; it is on the College books that although he died before its completion his design was carefully carried out.

The building stands detached in a fine open square, presenting a front nearly 80 feet wide facing South. Its detail is peculiar in character. The mouldings generally of the stonework are bold and heavy, and the angular pediment is supported by four Ionic pilasters of granite, peculiarly built up in courses with caps and bases of Portland stone. The main entrance is reached by a flight of ten steps rising to a height of five feet over ground level. The Dining Hall proper is approached through a spacious ante-hall or vestibule, and is a fine room well proportioned, measuring 84 feet long, by 35 feet in width, and 35 feet high. It is panelled in oak to a height of 12 feet round the four walls, mounted with a plain but effective capping cornice.

The Hall is abundantly lighted by four windows over the East side of the panelling; in the North end is a well designed Venetian window, and in the centre of the West wall is a very interesting fire-place in stone, with an overmantel in carved oak. There is a well arranged stone stairs leading to the Fellows Club or Common room over the ante-hall, and here some bent ironwork of good design is to be found in the balusters and balcony rail. A series of very fine full length portraits of some of the many distinguished graduates of the University occupy all the available wall space of the Dining Hall—Chief Justice Downes, Lord Avonmore, Grattan, Flood, and Prince Frederick (father of George III.), Hussey Burgh, Lord Kilwarden, &c., are amongst the pictures.

The ceiling is coved ten feet all round, and the plaster work, the wood work, and the details generally of the interior, are very pleasing and effective.

The building as now existing was commenced about 1758, and finished in 1761.

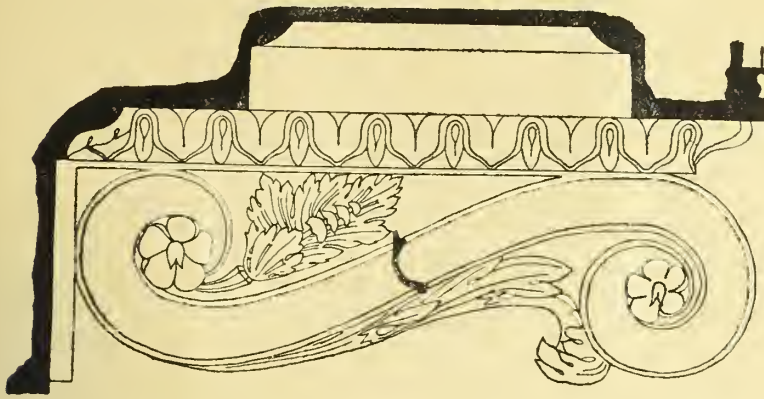
The New Ross Urban Council are about to select a local surveyor.

The Drumcondra Urban District Council have decided to appoint an additional sanitary sub-officer.

The Birr District Council have appointed Mr. Day to superintend the erection of labourers' cottages within their area.

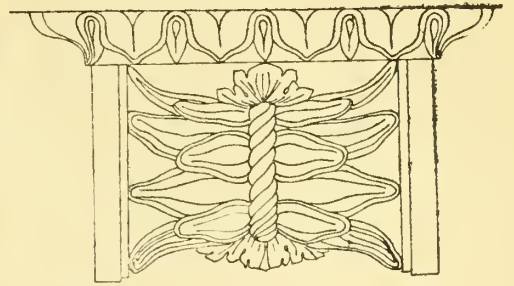
Mr. Mitchell, of Ballybrophy, has been appointed Clerk of Works to carry out the new scheme of labourers' cottages instituted by the Roscrea (No. 2) Rural Council.

Do you want to increase your Business? Then advertise in the *Irish Builder* the only technical journal in Ireland.



Cornice Console, Temple of Jupiter Stator, Rome.

(From Taylor and Cresy.)



## CLASSIC DETAILS AND THEIR APPLICATION.

By G. A. T. MIDDLETON, A.R.I.B.A., M.S.A.  
Author of House Drainage, Surveying and Surveying Instruments, &c.

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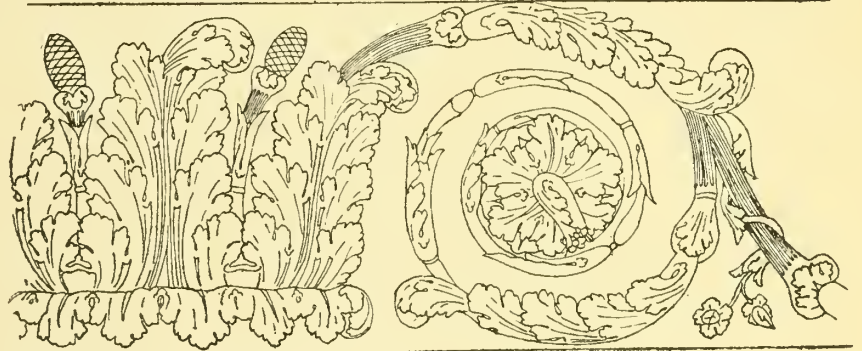
### V.—CLASSIC TIMES: THE CONSOLE AND THE SCROLL.

While the cornice was usually the crowning feature of a building, yet even in Egypt, in the Theban period, it was commonly found over the doorways to pylons and tombs, serving no other purpose then to mark these entrances; and from the few indications we have left to us, we infer it to have been similarly employed by the Greeks, knowing it to have been so used, at least, in the one Ionic example of the Erechtheum. In Egypt, however, the simple cavetto cornice, with its enrichment of the carved winged globe, was simply planted upon the face of the wall, and this want of apparent support was just the description of artistic blot which the Greeks would naturally be expected to remedy. The means adopted was that of the vertical truss or console projecting out of the masonry on either side of the door, which, while serving no constructional purpose, just satisfied the æsthetic needs of the case. The example illustrated herewith, from the Island of Kos is of uncertain date, and exceptionally simple outline and small size; but those which flank the Erechtheum doorway are elaborate in their ornamentation, with crisply-carved acanthus leaves, and with a detached anthemion filling up the angular space under the volute of the truss, much as the bud does under the spiral in the Corinthian capital at Epidauros, already illustrated.

A detail like this, occupying a definite position to which it was well adapted, was not likely to be neglected by the Romans. Using it in its proper position, they produced several good examples, amongst the best being that upon the highly-refined Maison Carrée at Nismes—a building which, in spite of its late date, remains to us as one of the best of the Roman Empire, and upon this console, as illustrated, the use of projecting acanthus rosettes in

the eyes of the volutes, and of the plaited hair ornament in bands down the front are noticeable, as is the form of the anthemion in low relief. Long before the date of this building, however, the Romans had employed the console

elsewhere. In the Arch of Titus it is found forming the keystone to the great arched opening, and supporting the cornice over—a most questionable position for its employment when the order was a decoratively applied order only, presumably carried by the columns at the side, and not by the arched construction. More frequently, however, it is found with its greatest length horizontally in buildings of the Corinthian order, acting as a support to a greatly projecting cornice, the bed-mould carried round it, and the effect, owing to its occurrence with but little space between, being much that of an elaborately enriched dentil course. As a rule, its employment in such a position seems legitimate



Portion of Frieze Scroll from the Maison Carrée at Nismes.

enough, though it must be owned that it appears more often to depend from than to support the cornice over, this being in such cases due to error of design, not only the appearance but the actuality of support being intended.

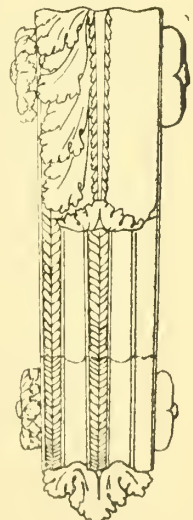
Its use as a bracket once established, however, its degradation was certain, and its employment to carry sills of niches, upon which sills rest small orders—as at the



Door Console from  
Chamyteion Pyli, in the  
Island of Kos.  
(From Newton and Pullan's  
"Halicarnassus.")



Door Console from the Maison Carrée at Nismes.



palace at Spalatro—can hardly be defended, their apparent weight-carrying power being insufficient for the task imposed.

Another detail which was eminently suited for Roman tastes, and which it was left almost entirely to the Romans to develop, was the acanthus scroll, and so long as it is found without the intermixture of natural forms, taken from

either the animal or the vegetable kingdom—so long, that is, as it was entirely conventional—so long was it invariably pleasing. In fact, the scroll with which the frieze of the Maison Carrée is enriched has rarely been surpassed for richness and voluptuous beauty of design, without overwhelming power, relief, and being suitable to its position as a band of ornament, at a considerable height above the eye, upon a rich Corinthian building.

(*To be continued.*)

## BUILDING NEWS.

**Athlone.**—The hospital in connection with the Athlone Workhouse has for a considerable time past been found quite inadequate for the accommodation of the number of patients requiring medical and surgical treatment coming from various parts of the union. The result has been that it has been obligatory on many occasions to have two people in one bed, and also when a crush has arisen to treat some of the patients in the infirm wards in the house. The guardians, having obtained a loan for the building of an additional wing to the hospital, a plan of same was prepared by Mr. Prendergast, C.E., and submitted to the Local Government Board. At a meeting of the guardians, the Local Government Board wrote approving of this plan. The erection of the new wing will be immediately proceeded with.

**Ballyshannon.**—Extensive repairs and improvements are about to be effected at Ballyshannon Church. The architect is Mr. T. Elliott, 37 Darling-street, Enniskillen.

**Ballymote.**—A sum of £60 is to be spent on the repairs of the Methodist Church at Ballymote.

**Bangor.**—The new Presbyterian Church at the corner of Prospect and Hamilton Road was opened lately. The building is of large proportions, and the general arrangement of the plan is a departure from ordinary church architecture. A large open auditorium space, giving seating accommodation for a congregation of about 1,000, was secured for the site, and the arrangement of the plan to meet these requirements led to a change from the ordinary rectangular form. The church itself is about 60 feet wide and about 80 feet long, the upper or pulpit end being 70 feet wide across the transepts, and rectangular in form. The remaining half of the church is polygonal in shape, thus giving a large amount of seating accommodation close around the pulpit. In order to avoid the structural necessity for columns, the roof has been carried on steel girders in one span, and the galleries have been carried out on steel cantilevers, allowing of an uninterrupted view. At present the ground floor of the church has been completed, and the structural part only of the gallery put in, the flooring and seating for which can be fixed any time an extension of the accommodation of the church is required. A special feature externally of the building, when completed, will be the vestibule and tower. In order to save present outlay as much as possible, this vestibule and tower have been omitted, giving an unfinished appearance at present to the block of buildings. The church is carried out in a simple form of the perpendicular Gothic style. The material of which the building is composed externally is Scrabo stone shoddy dressings, with wrought window and other facings. The roof is covered with Bangor slates, and the apex of the roof is formed into a glazed dome, giving light through ceiling panelling to the whole of the centre of the church. Internally, the woodwork has been finished in pitch pine, the large span of roof being panelled out with moulded ribs, and the pews and other woodwork are also finished in pitch pine. The pulpit will be of an elaborate character. It is executed in pitch pine and walnut. The platform floor of the pulpit is supported on an open row of columns with carved caps, and the balcony of

the pulpit with Gothic arcading and small intermediate carved pillars. On either side of the pulpit there is a flight of steps and a large ornamental gas standard. At the back of the pulpit there is a high screen in pitch pine and walnut. A door in the centre of the screen opens into the minister's vestry at the rear. In front of the pulpit there are two areas, the first for communion table and the second for the choir, separated from each other by an open walnut railing. Above the pulpit is placed a stained glass window. The other windows are glazed with cathedral tinted lead lights. The heating is with the small pipe high-pressure system. The work has been carried out according to the plans and under the personal supervision of Mr. W. J. W. Roome, M.S.A., by the following:—Messrs. M'Laughlin & Harvey, builders; the structural steel work by Messrs. Richard Moreland & Sons, of London; the glazing of the windows by Messrs. James Campbell & Co.; the gasfitting by Messrs. James Baxter & Sons, York Lane; and the heating by Messrs. Crooks & Crozier.

**Barntown.**—On 15th September the beautiful church of St. Alphonsus, Barntown, was consecrated by the Bishop of Ferns.

**Belfast.**—After a lapse of two years, it has been found that the new Y.M.C.A. premises are quite insufficient for the increasing work of the Association, and this applies particularly to the large hall and reading-rooms. In the meantime the large hall is being dealt with, and Messrs. M'Laughlin and Harvey, the contractors, are working energetically to have the extension effected in time for the winter operations. The addition will consist of 30 feet to the east end of the hall, which will increase the seating capacity to 2,000. The platform will consist of a splendid orchestral arrangement surrounding the Sir George Williams grand organ. Immediately off the platform will be retiring rooms, with a large and well-equipped kitchen, in view of social meetings. Additional means of exit will also be provided, adding much to the comfort of large assemblies. The builders of the grand organ, Messrs. Binns, of Leeds, have contracted to re-erect the organ, and the work is progressing rapidly.

The Local Government Board have sanctioned an application by the Market Committee of the Borough Council for a loan of £30,000 to cover the cost of erecting a new abattoir.

The old church, known as the Fisherwick-place Church, is about to be demolished to give room for an elegant structure to be known as the Presbyterian Assembly Hall. The cost will be about £20,000, and the situation is a very central one. The architect and builder have not yet been selected.

The foundations for a large warehouse are being piled at the corner of Wellington-place and Queen-street. Mr. W. J. W. Roome, M.S.A., is the architect, and the contractors are Messrs. M'Laughlin and Harvey.

A new red brick warehouse is being put up in Queen-street for Messrs. Dickinson. The architect is Mr. R. J. Calwell, and the builders Messrs. Courtney and Co.

Rapid progress is being made with the laying out of the Sans Souci estate on the Malone Road, the former residence of J. J. Pim, Esq. The avenue is laid out with serpentine sweeps, and building operations have been started in the shape of two commodious semi-detached villas. The plans of these were won in competition by Mr. James G. Lindsay architect, of Glengall-place, and the builder is Mr. Joseph Smyth, of Cliftonville. The cost of these will be over £1,700.

Branch premises for the Bank of Ireland are being built near the Queen's Bridge. The architects are Messrs. Millar and Symes, and the contractor is Mr. R. Corry.

**Broomfield.**—The new church of St. Patrick, Broomfield, Donaghmoynce, is making rapid progress. The contractor, Mr. James Wynne, Dundalk, has 27 men employed on the work, and is pushing it on as expeditiously as possible. The architect is Mr. George L. O'Connor, Dublin. Though the actual work of building was begun but five months ago, the edifice is already 16 feet high. It is a very substantial structure, and when finished will be a beautiful church. The nave is lighted by four lancet windows in each side, of a single light each, and in the western gable, over the main entrance, is a large treble-light window, with two smaller ones lower down. Opposite this window is the large window of the chancel, and there is a similar treble-light window in the end of each transept, together with a single light in one of the sides. The tower is lighted by three small windows, one in each of the outer sides. The sacristy is placed at the angle between the chancel and northern transept.

**Castlereagh.**—The new altars of St. Patrick's Roman Catholic Church at Castlereagh have just been consecrated. The High Altar is Gothic in style, and is of Caen stone and coloured marbles. The antependium represents the Annunciation. The pillars are of Connemara marble; the capitals, highly carved in natural foliage, support a Carrara marble slab. The Tabernacle, in similar material, encloses a highly embossed brass safe with coverhead. The reredos is a work of exceptional merit. The central panel is the Crucifixion with figures of the Blessed Virgin on each side, with life-sized figures of SS. Peter and Paul. An arcade of rich tracery fills the entire middle of the chancel, each group surmounted by a tympanum with highly-carved crockets and finials reaching the base of the chancel window, this latter consisting of five lights. The side altars are of similar structure and harmonise well with each other. In the erection of St. Patrick's care has been taken to preserve local traditions and the memory of the saints of the parish. It is satisfactory to mention that all the materials used in the erection and for the adornment of the church are of Irish manufacture, as well as most of the interior fittings, including the splendid stained glass windows, with one or two exceptions.

**Clones.**—New schools are to be erected at Clones from the designs of Mr. T. Elliott, architect, of 37 Darling street, Enniskillen.

**Clontarf.**—At a meeting of the Clontarf Urban District Council a resolution was passed adopting that part of the Housing of the Working Classes Act, 1890, which enabled the Council to apply for a loan to carry out a scheme of workmen's dwellings in the district.

**Cloughglass.**—Three cottages are to be erected at Cloughglass, Londonderry, from the plans of Mr. R. Eccles Buchanan, architect, Londonderry.

**Cork.**—Mr. P. C. Cowan, M.I.C.E., one of the Local Government Board Inspectors, held an inquiry in reference to the application of the corporation for sanction to a loan of £6,100 for the purpose of the erection of public baths. Mr. H. A. Cutler, the city engineer, stated that it was proposed to construct two swimming baths, 75ft by 30ft each, with a depth of water of from 3 ft. 6 in. to 6 ft. 6 in., on a site in Elington-street at the rear of the municipal buildings. Adjoining the swimming baths it was proposed to construct nine douche baths in separate rooms. These were to be conveniently arranged, so that persons of the coal-porter class could first have a douche bath and then a proper swim. There were to be nine of these in each bath, or eighteen altogether. There would be two entrance halls, with an office to each, and a stall for day bathing dresses for each. There would be separate doors for each bath, so that one could be used on certain days in the week for ladies and the other for men. At the back of the house there would be a boiler-house and coal-house for heating the water.

**Dublin.**—The Board of Works are inviting tenders for the construction of extremely large additions to the National Gallery. The extra accommodation is chiefly required for the display of a splendid collection of pictures, which the Countess of Milltown has generously presented to the Gallery as a memorial to her late husband. The magnificent collection, which is now located at Rushborough House, Blessington, is one of the finest on either side of the Channel, including numerous pictures rare and priceless, and various objects of art. There is also a valuable library, which by the terms of the gift must be included in the "Milltown Collection." Another object of the extension is the re-arrangement to greater advantage of the present collection and its future augmentation. The extensions will include a gallery of somewhat similar dimensions to the present one, but arranged quite differently. The gallery will consist of a series of comparatively small rooms of octagonal shape, which is calculated to largely facilitate the study of the exhibits. A number of workmen are at present engaged on the large plot of vacant ground between the present buildings and Clare Lane in excavating for the purpose of having the ground ready for the foundations when the contractor has been decided upon. It is to be hoped that a Dublin contractor, or if not, an Irish firm at least, will be given the execution of the work.

St. Mark's Church was recently re-opened for Divine Service on Sunday morning, after being closed for a couple of months for painting and restoration. As well as being generally renovated many desirable improvements have been effected in the interior of the Church. In the porches the old worn out flag flooring has been replaced with handsome encaustic tiles, whilst the walls have been wainscoted to a height of several feet, and the panels of the doors leading into the Church have been glazed, the general effect being exceedingly fine. A great transformation has been wrought in the interior of the beautiful Church. The walls and ceiling have been repainted and decorated in suitable colours, and the pews and galleries re-varnished. The painting is most artistically executed throughout, and imparts an appearance of great beauty and richness to the sacred edifice. The fine carved oak pulpit has been thoroughly restored, the lines and curves being brought out almost with their original distinctness. The pillars have been painted in enamelled white, the capitals being picked out with lines of gold. As another result of the restoration which has been zealously promoted by the Rector of the Parish, the lighting and ventilation of the Church will be considerably improved. All the old lower windows of ordinary glass have been replaced with Cathedral glass. Incandescent lights have also been substituted for the gas lights. Amongst the many other improvements that have been made the memorial tablets on the walls have been thoroughly cleansed and polished, and the Chancel carpeted in material of suitable colours. The work of painting and decoration was carried out by Messrs. Gibson and Son, the carpeting and upholstering by Messrs. Anderson, Stanford, and Ridgeway, and the tiling and windows by Messrs. Dockrell. Funds are now required to provide a rectory, which we cost a £1,000, and a new organ, which will cost £400.

**Dundalk.**—Work has been commenced at the site of the new Post Office in Clanbrassil Street.

The Harbour Commissioners have appointed a committee to report on the suggestion that a new Harbour Office should be erected, and at the same time the entrance to the "Sandhole," which runs alongside, widened.

**Finvoy.**—The consecration of the new chancel of Finvoy Parish Church, and the dedication of the Moore Memorial Window, took place on the 7th ult. This quaint little church had fallen greatly out of repair, and to remedy this a bazaar was organised, which was so generously supported that by it and other subscriptions the church

has been put in a thorough state of repair—the old flat ceiling taken down and cased with pitch pine, a chancel, vestry, and heating chamber built, heated with hot water pipes, and the plain glass windows replaced by Cathedral glass. The beautiful three-light stained glass east window is the gift of the Moore family, of Moore Lodge. The architect was Mr. S. P. Close, A.R.H.A., of Belfast.

**Howth.**—The new Roman Catholic Church at Howth has just been opened, but £20,000 or more, will be required to complete it. On the foundations alone, a sum of £1,000 was spent. It is Romanesque in style, and is of ornate character throughout. The chiselled granite used was got at Aughrim and Kilquiggan. The church comprises nave, tower, two transepts, porches, sanctuary, two side chapels, and sacristies. The nave is 86 feet long by 32 feet 6 inches wide, and the height is 40 feet. The tower and spire when complete will reach an attitude of 142 feet, and will be surmounted by a wrought iron copper-gilt cross. The walls have been carried up in courses, and lined inside with brickwork. The stonework was carried out by Mr. William Lacy, of Howth; the roofing and woodwork generally were supplied by Messrs. T. & C. Martin, of Dublin, while the plastering was executed by Mr. Burke. The church was designed by Mr. William H. Byrne, F.R.I.A., architect, and carried out under his superintendence. There was no regular contractor, and at no time was a Clerk of Works engaged. From the start Canon Flanagan personally superintended the work as well as the architect. The windows, which are artistically designed and wrought, have been erected by Messrs. Martin and Son, Stephen's Green.

**Pembroke.**—The Pembroke Urban District Council, near Dublin, has instructed its Surveyor, Mr. Farrell, to prepare plans and estimates for a scheme for the erection of about 100 dwellings of different classes to be built on a site at Ringsend, which has been presented to the Council by the Earl of Pembroke and Montgomery.

Additions are to be made to the Town Hall from plans by Mr. C. H. Ashworth, Architect.

**Rossclare.**—A sanatorium, the first of its kind in Ireland, has been erected for the "Nordrach" system for the treatment of consumption at Rossclare, on the shores of Lough Erne.

**Santry.**—Santry Church, which has undergone extensive repairs during the last three months, was re-opened on Sunday last, September 17th. The old roof, which was in a dangerous condition, has been replaced by an open pitch-pine roof of fine proportions. The Church has been completely repaired and improved in many respects, the walls and woodwork being painted in suitable colours. A handsome corona light is presented by Miss Lefroy, in memory of her father, the Rev. Henry Lefroy, who was for 30 years Vicar of Santry. The works have been carried out most satisfactorily by Mr. Robert Farquharson, contractor, of Jones's road, under the supervision of Messrs. Carroll and Batchelor, architects. His Grace the Archbishop, preached at the re-opening service, and will dedicate the new organ.

**Smithborough.**—A new central creamery has lately been opened at Smithborough, conveniently situated close to the railway station. The machinery is of the latest and most modern type, and comprises two separators, pasteurisers, a large churn and butter worker, also 12-horse-power vertical boiler and horizontal steam engine. Everything is on the Danish system. The creamery is fitted up throughout with steam, hot water and cold water pipes. The milk is received at one door, and comes out separated at another door. The Smithborough society have made rapid strides in their short existence. They have now started four auxiliaries, whilst seven others are in the course of erection, or have been erected. The entire County Monaghan will be taken in when all the auxiliaries have been completed.

## ENGINEERING NEWS.

**Ardee.**—The Ardee Rural District Council have called for tenders for new pipe drains and channelling for drainage works.

**Armagh.**—The Armagh Urban Council have applied for a loan of £12,000 for the purpose of carrying out new sewerage works for the town.

**Athlone.**—At a meeting of the Athlone Urban Council a reply was received from the Secretary of the Board of Public Works, stating that the loan of £4,500 would be granted to the Council for the extension and improvement of the Athlone Gas Works. In anticipation of this loan the improvements in connection with the Gas Works are already proceeding.

**Ballybay.**—It is likely that a new scheme for waterworks will shortly be started for Ballybay.

**Belfast.**—The Belfast City and District Commissioners intend laying a line of 12-inch cast iron pipes between the high service reservoir at Old Park and the new reservoir in course of construction.

In connection with the Mourne Extension, they are about to lay the second section of the Knockbracken main.

Tenders have just been called for the partial reconstruction of the bridge over Pound Burn for the Improvement Committee, from plans prepared in the City Surveyor's Office.

Sewers and other works are about to be constructed in the Balmoral district, also from plans prepared in the City Surveyor's Office.

A deputation from the Belfast Corporation visited Douglas for the purpose of inspecting the electric tramway system, which is on the overhead principle. From the opinions elicited it is probable they will report favourably.

**Birr.**—The question of lighting the town by electricity will be considered at the next meeting of the board.

**Cahirciveen.**—It is in contemplation to provide works for a supplementary water supply for the town of Cahirciveen, according to plans and specifications of Mr. Hickson, C.E.

**Carrickmacross.**—The Carrickmacross waterworks will be completed shortly at a cost of £750, which will be a supplemental loan.

**Clonakilty.**—The Clonakilty Urban District Council are about to metal the roads and streets within the Urban District.

**Clontarf.**—The Clontarf Urban Council have applied to the Local Government Board for a loan of £1,100 for concreting and other improvements. Mr. P. C. Cowan, Local Government Engineering Inspector, held a local inquiry with reference to the application on the 28th ult.

**Dublin.**—The platform at the Carlisle Pier is about to be extended, so that all trains can be drawn up at the pier together and be loaded simultaneously. The Board of Works have now commenced operations.

The tender of Messrs. Pearson and Son, Limited, of London, was accepted for the Main Drainage contract, for outfall sewers, precipitation tanks, &c. They are one of the leading firms in England, and the magnitude of their business can be estimated from the fact that they had undertaken a contract in Mexico for eight millions. The amount of their tender was £94,003 14s. 9d., and was only £2,000 in excess of the Corporation estimate for the work. The tender of Messrs. H. and J. Martin, Dublin, was £108,370, and that of Mr. John Best, Edinburgh, £126,339 18s. 8d.

The Electric Lighting Committee will be justified in obtaining, as they propose to do, a fresh loan of £20,000 for the laying down of new cables, as they expect to have a balance to their credit on the 31st March, of over £900.

**Dundalk.**—A special meeting of the Urban Council in committee was held last night to meet Messrs. Crossley, Dillon, and Ryan, representing the Tramways Company. A long discussion took place upon the terms of the deed of electric lighting provisional order, and we understand that the basis of a final agreement was eventually arrived at. We believe that the company have agreed to light the town for £525, the lighting of the Town Hall to be a separate contract; and that only one or two legal points remain to be settled between Dr. Moynagh and Mr. Dillon. Mr. Ryan stated that the Company would commence work within a month of a settlement coming to, and that the town should be lighted with electricity next year.

**Greencastle.**—The improvement Committee of Belfast have under consideration the question of improving the drainage of Greencastle, and desire that Whitehouse should join them in the carrying out of a joint scheme.

**Killeens.**—The Cork District Council are about to construct waterworks at Killeens.

**Londonderry.**—The Council of the County Borough of Londonderry are inviting tenders for the construction of the proposed Killea extension. The works include storage reservoir and appurtenances at Killea and Altahaderry, about 6,900 lineal yards of cast-iron pipes and fittings, 970 lineal yards of earthenware pipes, with other miscellaneous works. The engineer is Mr. J. J. S. Barnhill, C.E., ra Strand, Londonderry.

**Macroom.**—The Board of Guardians are about to construct sewers, sewerage works, tanks, and water supply. The engineer is Mr. A. W. Barnard.

**Monaghan.**—A water scheme for Monaghan is going to be started. Mr. Wilson, one of the engineers, made a statement in which he showed that to supply the town and all its institutions with water something like 100,000 gallons a day would be required. The reservoir would be capable of holding ten million gallons, or in other words, a supply for one hundred days provided no water was flowing into it. The present had been a very dry summer, yet there was a good supply of water at present at the reservoir. The highest point in the town was the top of Rooskey Hill, and the outlet of the reservoir was 130 feet above that, so that the pressure would be sufficient. They proposed to convey the water to town by six-inch pipes as far as the Diamond, and to use three-inch pipes through the other streets of the town. The estimate of £8,000 included 10 per cent. for contingencies, and he believed would cover all the cost.

**New Ross.**—The extension of the Dublin, Wicklow, and Wexford Railway from New Ross to Waterford is well started, the contractors being Messrs. Pearson and Son, Limited. The completion of this line will make a considerable change in the railway position in the south of Ireland, inasmuch as it will provide an alternative route from Waterford to Dublin, as well as to Kingstown for the mail boats. It is intended to open the new line for traffic on 1st July, 1901.

**Newry.**—It is proposed to erect a railway from Newry to Tynan at an estimated cost of £180,000. Of this sum London financiers have promised £130,000 if the Newry Urban Council guarantee 4 per cent. on the other £50,000, which guarantee, if called upon, would tax the town to the extent of 1s. 6d. in the pound.

**Newtownstewart.**—A steel overline Footbridge will shortly be erected at Newtownstewart Station; tenders being lodged on the 2nd inst. The designs and specification were prepared in the Engineer's Office, Amiens Street Terminus, Dublin.

**North Tipperary.**—A project of considerable general interest, and of the first importance to a very extensive area of country in North Tipperary, lying partly in the Birr and

partly in the Borrisokane Unions, was approved of at the Borrisokane District Council meeting, on the motion of Mr. Meara, seconded by Captain the Hon. Cosby G. Trench, D.L. The scheme provides for the complete drainage of no fewer than 37 townships, by sinking all the rivers and streams that feed the Lough Derg section of the Shannon between Ballyquirk and Clohaskin in one direction, and from Carrigahorig to Loughnahinch in another. Many thousands of acres of what must be very valuable land will thus be reclaimed in a quick and effective manner.

**Portadown.**—The proposed water supply for Portadown was under the consideration of the town council at their last meeting. The following letter with reference to the engineering of the scheme was read from Messrs. Shillington and Dorman, civil engineers:—Dear Sir,—As was arranged at the committee on Wednesday last, 30 ult., we have gone into the figures of probable cost of water supply of Portadown, and we find that, owing to various causes, principally the great rise in the price of iron since our estimate in '93, and also a sensible increase in wages, as well as the town of Portadown has grown with unexpected rapidity in the past few years, we have as a basis for arranging our remuneration to estimate the cost of construction (including everything except land and legal expenses) at £14,500. Should the sites for the pumping station and reservoir for pressure have to be chosen farther apart than in our original scheme, say a half a mile more, the cost would be increased to about £15,000. Therefore, in order to give us a choice of sites, farther or nearer, we think it safer to adopt the larger figures (15,000) and we agree to do the whole engineering work in connection with the scheme for the sum of £500 as proposed by the committee, if the council will meet us by agreeing that in the event of the total cost not exceeding £15,000 by more than 5 per cent. thereof, we shall be entitled to receive a difference sum of £100, making in such a case a total of £600. Mr. Courtney thought they might save a little money if they issued advertisements inviting engineers to tender for the work. After considerable discussion, Mr. Clow moved that the offer of the engineers be accepted, providing that the sum asked covers all past expenditure in connection with the scheme.

**Wexford.**—It is not often a company is able to create a site on which the works can be carried on. This event has just occurred at Wexford. The Wexford Engineering Company wished to set up business close to the town of Wexford, but a site was not available within a mile in any direction. It was therefore resolved to reclaim one from the sea. The Admiralty gave facilities to operate on the foreshore, and the Commissioners of Works in Ireland allowed the company to hire a powerful steam dredger. About three months ago operations were commenced. Sand was dredged from the harbour to the extent of 1,600 tons daily. When laden the dredger steamed to the new site, where a large pipe connected with a centrifugal pump on shore was lowered into her hopper. The pump on the foreshore was then started, and the full load of sand with its accompanying water was discharged in less than forty minutes, and conveyed from the pump in shoots to any portion of the site required. The water running back to the harbour left the deposit of sand, which now forms a floor as firm as concrete, and thoroughly capable of supporting the buildings that will shortly be erected upon it. The site has an area of about 8 acres, and will give many facilities for obtaining coal and materials and for the exportation of products.

**The Mallow** District Council require a qualified engineer to take charge of the carrying out of a system of waterworks for the town of Doneraile. The appointment will be made on the 4th October.

## BOOKS RECEIVED.

**The Annual Report of the Board of Works.**—We are in receipt of the Sixty-seventh Annual Report of the Commissioners of Public Works in Ireland for the year ending 31st March, 1899. The Irish publishers are Hodges, Figgis, and Co., Grafton Street, Dublin, from whom this blue-book can be obtained. To our readers it is a particularly interesting document, and we regret that we have not more space at present for a more lengthy review.

Under Voted Services, Class I., for Public Works and Buildings, we find the expenditure for 1898-99 has been £202,450, and for Railways, £91,874. In Class II., Public Works Office, the expenditure has been £39,365 for the same period.

For National School Grants during the year the commencement of works was authorised at 178 schools; issues at foot of grants were made to 194; and 72 new schools, the building of which was aided by grant, were completed. Amongst the last were the following important schools: Castleisland Convent School; Crumlin-road, Belfast; St. Patrick's, Bray; St. Columba's, Clontarf; St. Stephen's, Waterford. A sum of £33,500 was provided by the estimates for 1898-99 to meet the demands for grants during the year. The expenditure reached only £27,131, and thus £6,369 was left unspent out of the provision, and returned to the Exchequer.

Among other building works, we notice alterations and additions to the Postal Stores, Aldborough House, Dublin, at a cost of about £7,467: completion of the Belfast Parcels Post Depot and Telegraph Engineer's Workshops; heating, laundry and other improvements at the Dundrum Criminal Lunatic Asylum; completion of the Queenstown Custom House; improvements at the National Library, Kildare-street, Dublin; while provision was made in the estimates for a Central Bridewell.

Under Light Railways and Tramways, we find most important works in the opening up of steamer and coach routes in certain places in the West and South, the Shannon steamship service, worked by the Tourist Development Company, being the most beneficial to the tourist. The establishment of a steamboat cargo and passenger service between Sligo and Belmullet was of still greater value, from a business view. For this service a new pier is in course of erection at Broadhaven Bay, and a tramway is to be laid along the top of the decking. The contract price of the work is £3,264, Mr. J. Hemingway, of Belfast, being the contractor. By the construction of the Carndonagh and Buncrana, and Letterkeuny and Burtonport Railways, the northerly portion of Donegal will be opened up, and for this work Mr. Robertson, the Chairman of the Board, deserves great praise.

The Board of Works has also done good work in the conservation of National and Ancient Monuments, and among the principal works of repair carried out during the year were Clare Abbey, Donegal Abbey, Kells Abbey, Donegal Castle, etc. A sum of £50,000 was transferred to the Board by the Church Temporalities Commissioners under the Irish Church Act, and invested in Government Stock. The interest on the unsold securities is sufficient to meet the annual out-goings of the service.

The loans issued under the Labourers' Act fell to £46,458 from £60,616 in the previous year. Ulster and Connaught made a poor show in the erection of labourers' dwellings under the Acts. While £1,068,311 have been sanctioned for Munster, and £832,082 for Leinster, the Province of Ulster has only had £47,067, and Connaught a mere £15,000.

We note with satisfaction that new sanitary systems have been introduced at many of our Coastguard Stations and Police Barracks, and that precautions are being taken to protect our Post Offices from fire. Last year the loans under the Public Health Acts for Water Works, Sewerage, Lighting, Paving, etc., came to a total of £104,959.

Altogether the Irish Board of Works is doing most valuable service, more than many of us are aware, and we recommend our readers to purchase this Report for themselves, and carefully read it.

**The Conduct of Building Work.**—We have just received from that premier architectural publishing firm, B. T. Batsford, 94 High Holborn, London, a neatly got up little book entitled *The Conduct of Building Work, and the Duties of a Clerk of Works*, by J. Leaning, F.S.I. The matter is arranged under the usual trade headings, and in addition there is much useful information under the various paragraphs of Site, Pulling Down, Drawings, Quantity Surveyor, Work of Specialists, etc., all written in Mr. Leaning's well-known lucid style. A great many valuable hints are given, as well as valuable advice, and architects will find a good many tips to embody

in their specifications. The student will also find in it an excellent source from which to supplement the knowledge obtained in books on building construction, which frequently omit many practical little points here given by Mr. Leaning. A list of useful books to study is given at the end, and there is an appendix giving full information and Examination Papers for the appointment of Clerk of Works in Her Majesty's Office of Works. The price is only 2s. 6d., and the book is excellent value.



## A.A.I. JOTTINGS.

October 17th will see the commencement of the third session of the Architectural Association of Ireland. On that date the President, Mr. Geo. P. Sheridan, A.R.I.B.A., will deliver his inaugural address. All those interested in Architectural education will wish the Association a successful session.

We have had an opportunity of seeing an advance copy of the "Green Book," to be issued early in October. Amongst those who have promised lectures we notice the names of Mr. A. Scott, Mr. Orpen, Mr. Leask, Mr. Rea, and Mr. Maguire. Mr. Drew will read a paper on "St. Patrick's Cathedral and its History." Substantial prizes are again offered to each of the classes, and in addition prizes are offered by Mr. W. F. Beckett and Messrs. P. J. Neill and Co.

Mr. F. Core was the winner of this year's A. A. I. Travelling Studentship. He submitted a very carefully executed set of measured drawings of Powerscourt House, William Street, of which the adjudicator, Mr. T. M. Deane, spoke in the highest praise. An opportunity will be given to members to see these, together with other prize drawings, at an exhibition to be held during the coming winter.

Why do members fight shy of entering for this prize? Its value, and the opportunity it affords the winner to visit some of the interesting architectural centres in England, with the London A. A., should ensure keen competition.

The architects of Richmond Hospital, Messrs. Carroll and Batchelor, have given permission for the members to visit the work in progress there on Saturday, October 21st. This will be a visit of much interest, and Mr. Batchelor has promised to be present and show members over the buildings.

The social element is not to be neglected. One of the not least important of the "General Meetings" will take place on Tuesday, November 24th, when the annual Smoking Concert will be held at the Grosvenor Hotel. Members' friends are always welcome at these concerts, and we advise every member to bring as many as he can. They will not be disappointed.

Class announcements will appear in next issue.

"OCULUS."

## THE ARTS AND CRAFTS SOCIETY OF IRELAND.

### FORTHCOMING ARTS AND CRAFTS EXHIBITION.

HON. SECRETARY—COLONEL W. C. DICKENSON.

15, KILDARE STREET, DUBLIN.

SIR—The above Exhibition will be held in Dublin during November next. I fear it is not generally known throughout Ireland that the Exhibition will commence the week of the 19th of November. His Excellency the Lord Lieutenant has graciously intimated that he will open the Exhibition as he did our last one which was held in 1895.

I would draw attention to the fact that no charge is made for space in this Exhibition. All exhibits will be insured against fire and burglary, and if exhibits are for sale this will be stated in the catalogue.

The Senate of the Royal University have kindly granted the use of the same Halls as our Society occupied in 1895.

The Exhibition will consist of Contemporary Original Work in Decorative Design and Handicraft, such as Architectural Designs, Lay and Ecclesiastical; Bell-founding; Book-binding; Cabinet-making; Decorative Painting; Designs, Cartoons and Working Drawings; Embroidery, Lay and Ecclesiastical, on Silk, Linen, or any other material; Engraving, Lithography and the various processes of Book Illustration; Fan Painting; Gesso, Stucco, and Scraffito Work; Glass, including Stained Glass; Gold and Silver-smiths' Work; Hammered Iron Work; Lace; Lapidary Work; Leather Work; Metal Work; Mosaic; Poplin-making; Porcelain and Pottery; Printing; Seal-cutting in Stone, Brass, and Steel; Stone and Marble Carving; Terra Cotta; Wall Paper Designs; Wood-carving; Wrought Iron; besides Miscellaneous Exhibits to be approved by the Committee of Selection. Invention or mechanical contrivances are not, as such, admissible. An Ample Guarantee Fund has been raised, and already many have signified their intention of sending exhibits. There will be a section devoted to Arts and Crafts from Great Britain shown in a separate room from that of the Irish exhibits. There will also be exhibits of old Arts and Crafts to give an idea of what could be done in the past in Ireland. I trust that everyone interested in the Art and Handicraft of our country will help by sending exhibits worthy of acceptance. A strong Executive Committee has been formed, with Sub-Committees, to look after the different sections and arrangements of the Exhibition.

Every information can be obtained from the Honorary Secretary, Arts and Crafts Society of Ireland, 15 Kildare Street, Dublin.—I remain, Sir, yours faithfully,

MAYO.

President A. and C. Soc. of Ireland.

## CORRESPONDENCE.

### St. Anne's Parish Church, Belfast.

*To the Editor of the Irish Builder.*

SIR—A paragraph in the *Irish Builder* would intimate that the removal of this Church of 100 years standing would be to some minds in Belfast a sad loss to Architecture. I have met with a little natural sentiment about seeing the last of an old familiar institution, but no distress among people in Belfast for its removal to make way for a more noble Church. Without decrying the decent character in its way of an old familiar friend of my own of 50 year standing, I may say the departing St. Anne's, if "after Wren," is a very long way after Wren indeed. Its cramped galleried interior is not of noble design. Its four square walls of rough brick and its wooden window sashes have served out their time. Its only feature of architectural merit is a Tower Cupola which is for the most part of wood.

Its match-boarding and framing have been only maintained with much renewal of carpentry and painting in my memory for 50 years past. It is in fact no more than a perishable model in wood of what would be a respectable tower in stone.

The "frontispiece" portico is not of much architectural merit, and it, too, is of much decayed Scrabo stone that has lasted its time. The whole building has sunk, like most old buildings in the yielding soil of Belfast, until its floor is on the level of the ground and the steps on which it may have been elevated have long disappeared.

It has an item of some interest in the fittings throughout of the fine Domingo mahogany that was to be had in the last century, as pitch pine might be had in our day. All this framing will be carefully preserved.

Yours, &c.,

THOMAS DREW, F.R.I.B.A.

[Mr. Drew also points out that in our last issue, page 128, top of second column, the word "agricultural" has been substituted by the printer for "architectural," in referring to the style of Belfast Cathedral. We much regret this, and several other printer's errors, which have crept in, and which unfortunately were not corrected owing to our temporary absence.—ED.]

### Fireclay Sewer Pipes.

*To the Editor of the Irish Builder.*

SIR,—In your issue of 1st inst., Mr. J. Munce writes:—"For many years pipes have been made at Coalisland, near Dungannon, but until recently no attempt was made to produce an article approaching the Lancashire or Scotch pipes in finish."

In justice to myself and to the several engineers whom for about eight years—or from 1875 to 1884, used my manufacture, as well as for the success of home trade, I feel bound to ask you to kindly publish in the *Irish Builder* the following.

I was the first, and for the time mentioned—the only manufacturer of glazed sewer pipes in Ireland.

Being one of those who considered Scotch pipes the best, I aimed at an equal quality; that I succeeded in doing so, is without the slightest doubt. To begin at home with Mr. Munce, nearly one half, or about 300 yards of my out-put of pipes per week went to Belfast. A very competent judge, the late Mr. Mountgomery, City Surveyor of Belfast, pronounced them Scotch and passed them. A very eminent C.E. came to my works before fixing on the pipes for a large Sewerage scheme, and his report to his committee was, that my pipes were the best he had seen, and they were specified for the contract. For these works I supplied at least a mile of 18 inch bore pipes alone. I supplied the Dublin Corporation for two years; I also supplied pipes for drainage works in Dundalk and Drogheda. The Nationality of my pipes was known only by the brand, which I always stamped on when I thought there was no prejudice. In relation to the last item, I could tell some strange facts! Stranger than fiction. I am Sir,

Yours faithfully,

DANIEL DEVLIN.

Late of Coalisland.

[We are very pleased to receive the above communication, and hope that such Irish Manufacture will be encouraged. The address for enquires only is—Lough Cutra Castle, Gort, Co. Galway.—ED.]

### Turf Walls.

*To the Editor of the Irish Builder.*

SIR—Your correspondent, "Clerk of Works," draws attention to the practice of building partitions with turf and cottages with mud in "Ould" Ireland. A few years ago, in surveying some house property in north east Hampshire, I found the partitions were "wattle and daub," that is, a kind of basket work with mud forced into the interstices, and

spread thickly over it on each side to make smooth surfaces. On drawing the attention of a native to this primitive mode of building, he remarked, "Oí measter, he be a rum un, beynt he," which, being translated into English as it is spoken in "Ould" Ireland, is "Yes, sir, it is curious, is it not?" Mud walls, whitewashed, were common enough in the cottages and farm buildings of East Anglia up to quite a recent period, and the services of the "skilled" tradesmen who executed this work were eagerly sought after. In fact, our friends on the other side of the Channel are as superior to us in "jerry building" as they are in most other things, and we have much to learn from them in that art.

Your obedient servant,

GOBHAN SAER.

### Architectural Associations.

*To the Editor of the Irish Builder.*

SIR,—The proof-reader of the *I.B.* is evidently abroad! In the two reports dealing respectively with excursions of the Architectural Association and the A.A.I., and appearing in your issue of the 15th inst., the demon compositor has played havoc with the orthography, punctuation, and sense. One of the paragraphs as printed makes out several distinguished Architects, still amongst us, I am happy to say, as having reached the somewhat exceptionally ripe age of at least 150.

I must beg of you to give me an opportunity of repudiating responsibility for the articles in their published form. Thanking you in advance,

I am, sir, yours etc.,

"THE WRITER OF THE ARTICLES."

Dublin, Sept. 16th, 1899.

[We insert the above letter, but we may remark that the writing and punctuation of many parts of these contributions were quite unintelligible, and that, owing to the Editor's absence for a few days and the printer's misunderstanding, the proofs were not sent to the writer to be corrected. We also thought fit to exercise our editorial discretion and cut out many paragraphs with glowing descriptions of scenery, for which there really was not space. It is not obvious how the contemporary distinguished Architects have been made out to be 150 years of age. We may remark that this is an Irish paper, and we are not going to substitute English matter to please the members of any English Association, which can find its doings recorded in half a dozen technical journals across the water.—*Ed.*]

## ANSWERS TO CORRESPONDENCE.

"D. A. M." (Architect's Pupil)—For construction and practical knowledge you should write to the Secretary of the City of Dublin Technical Schools, Kevin Street, and ask for a prospectus, which costs one penny. See advertisement in our present issue. Also apply to the Secretary of the Pembroke Technical Schools, Ringsend. They have classes in Building Construction, Quantities, etc., which ought to suit your requirements.

"PAT."—We think the Second Victoria Mutual Building Society would suit you. The Secretary is Mr. Thomas Brown, and the offices are at 40 Dawson Street, Dublin. The object of the Society is to enable its members to purchase the houses in which they live, or other house property, by obtaining advances, to be repaid by easy instalments extending over 12½ years.

Hon. Sec., Master Builders' Association; Harry Hems and Sons (Exeter); H. N. L. (Donabate); J. G. G. (Belfast); T. McM. (Belfast); and W. N. B. (Crouch End, London)—We thank you very heartily for your good wishes, and your expressions of goodwill have done much to cheer us. Our efforts will certainly not be relaxed, though the difficulties are numerous.

## ANNALS OF MONKSTOWN

AND

### SOME NEIGHBOURING PARISHES IN THE COUNTY OF DUBLIN.

BY FRANCIS ELRINGTON BALL, M.R.I.A., F.R.S.A.I.

#### CHAPTER V.

1500-1600.

1504—Walter [FitzSimon] Archbishop of Dublin, confirmed to Holy Trinity, St. Fintan's Church at the Kill-of-the-Grange, St. Briget's at Stillorgan, St. Briget's at Tully, Killiney Church, and St. Begneta's Church at Dalkey, with their tithes, the lands of Kill-of-the-Grange, Killiney, Laughanstown, Brennanstown, Murphystown, "Farnecoste," Waltersland, Tipperstown, Carrickmines and Ballyogan, with their tithes, and a house on the western side of Dalkey Church. *Christ Church Deed.* No. 397.

1505—Johanna Waring, widow of Peter Bartholomew, of Dublin, granted to Holy Trinity lands at Dalkey. *Ibid.* No. 381.

1508—In a suit between Holy Trinity Church and John English, Canon of St. Patrick's and "Custos of the Lepers of St. Stephen, near Dublin," about the lands of Tipperstown, adjoining Leperstown, it was proved that the lands belonged to the Priory of the Holy Trinity, and that they were bounded by Kilmacud, Leperstown, and Kill-of-the-Grange; also that the "morelawe" belonged to the Priory, and contained "Tyrscocht" near the pond of Leperstown, and "Tyrsorryn" between Tipperstown and Kill-of-the-Grange. *Ibid.* No. 386.

1519—Edmund Walsh, of Carrickmines, at the request of William Hassard, sub-Prior of Holy Trinity Church, renounced his claim to lands called Keatingsland and Priorsland, near Carrickmines, but renewed his claim in the following year, when it was decided by arbitrators that the lands belonged to the Priory, and that Walsh should pay four marks for arrears of rent, and should have the lands for eleven years at a rent of 20s. and two hens at Christmas. *Ibid.* Nos. 408, 1134.

1524—James White, Archdeacon of Armagh, granted to Holy Trinity Church a house and garden at Dalkey, and Anna, daughter of Peter and Johanna Bartholomew (see year 1505), gave him her lands at Dalkey for the use of Holy Trinity Church. *Ibid.* Nos. 413, 416. White seems to have been chaplain of Dalkey Church, as well as Archdeacon of Armagh.

1534—Sir William Skeffington, on his arrival as Lord Deputy, landed at Dalkey. Gaskin's *Irish Varieties*, p. 14.

1536—The Prioress of the Convent of Graney, Aegidia Wale, was found to be seized of the rectory of Kilmacud, then demised to Thomas Porsiveck, Rector of Lyons, and John FitzSimon, of Dublin, merchant, at a rent of ten marks. Archdall's *Monasticon Hibernicum*.

1538—The Priory of the Holy Trinity leased to James Ashpoll, of Laughanstown, gent, the lands of Laughanstown at a rent of 40s. *Christ Church Deed.* No. 1167.

1538—The Priory of the Holy Trinity gave William Walsh, called William M'Howell, of Killiney, gent, a lease of the lands of Killiney, and the temporalities thereof, for thirty-one years at a rent of £1 6s. 8d. This lease was renewed to Walsh in 1566 by the Dean and Chapter. *Ibid.* Nos. 1168, 1301.

1539—Walter Cowley, then Solicitor-General for Ireland, landed in March at Bullock, having treasure in his charge which he had brought from London. He had travelled by St. Albans, Towcester, Coventry, Lichfield, Nantwich, Chester, Conway, Beaumaris, and Holyhead. See for account of his journey, *Irish Builder* for 1897, p. 35, and for paper on the Cowleys, from whom the Dukes of

Wellington are descended, *Transactions of the Kilkenny Archaeological Society* for 1852, p. 102.

1539—John Allen, Chancellor, George Browne, Archbishop of Dublin, and William Brabazon [an ancestor of the Earls of Meath], sub-Treasurer, ordained that the ministers of Holy Trinity Church should in future be regarded as secular priests, and wear secular habits, and that the Church should have a dean, precentor, chancellor and treasurer like St. Patrick's. They also ordained that the dean should enjoy Kill-of-the-Grange for his dignity, together with the temporalities of Kill-of-the-Grange, Dalkey, Killiney, Laughanstown, Brennanstown, Tipperstown, Ballyogan, Murphystown, "Farnecoste," Priorsland and Keatingsland, and "the churches" of Carrickmines, Tully, Stillorgan, Kill-of-the-Grange, Dalkey, Killiney, Laughanstown, Rochestown, Cornel's Court, Kilboggett, Stillorgan, and Newtown, with "their chapels and tithes." *Christ Church Deed.* No. 431.

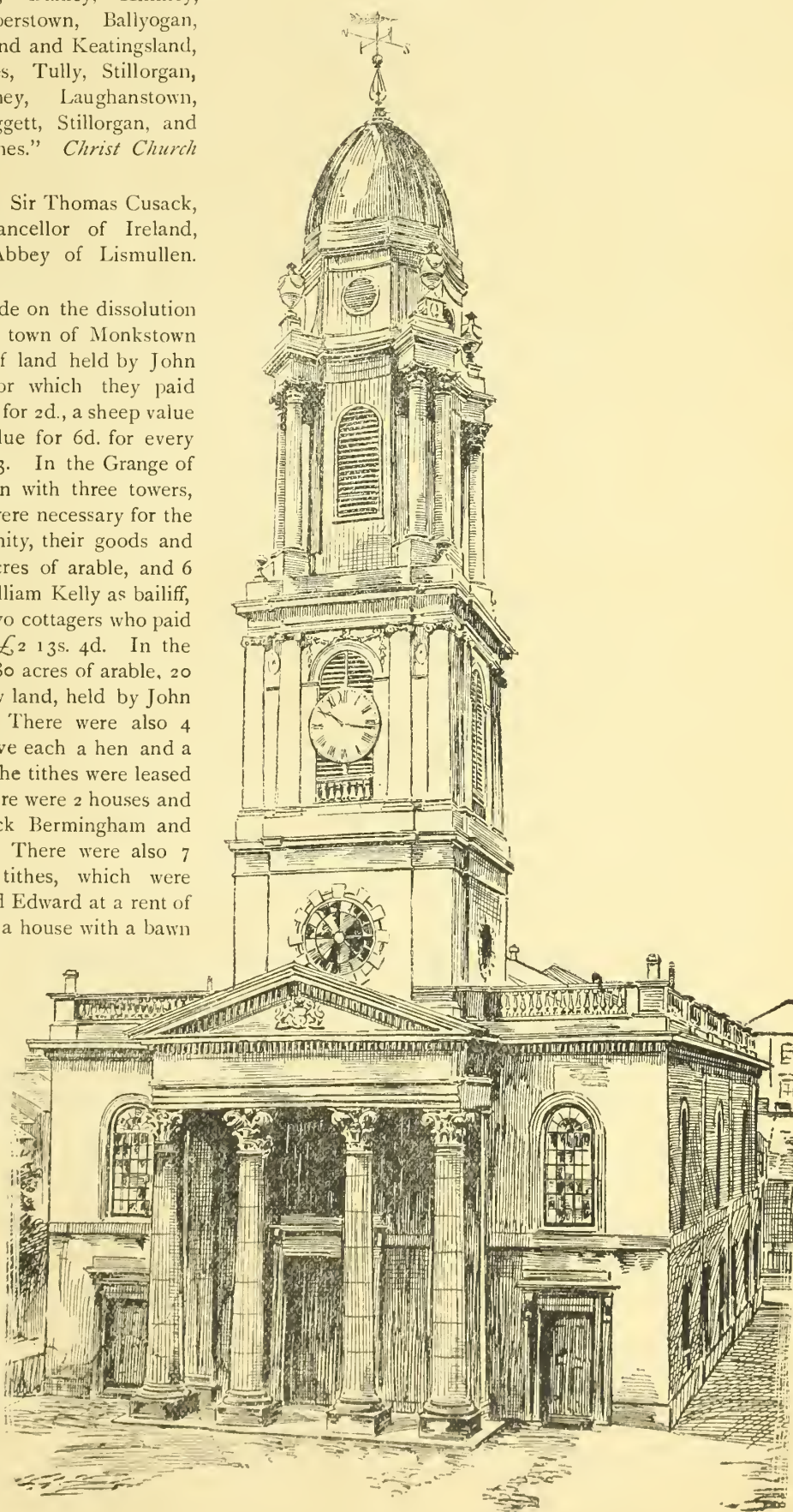
1539—Cornel's Court was leased to Sir Thomas Cusack, of Cussington, afterwards Lord Chancellor of Ireland, amongst other possessions of the Abbey of Lismullen. *Fiant*, Henry VIII. No. 91.

1539—According to the survey made on the dissolution of St. Mary's Abbey, there were in the town of Monkstown 4 houses, 13 cottages and 207 acres of land held by John M'Teg, John Ryath and others, for which they paid £10 1s. od., and gave each a hen value for 2d., a sheep value for 8d. for every seven, and a pig value for 6d. for every seven. The tithes were valued at £3. In the Grange of Monkstown there was a chief mansion with three towers, surrounded with stone walls, "which were necessary for the defence of the inhabitants of the vicinity, their goods and cattle," with 5 acres of pasture, 120 acres of arable, and 6 acres of meadow land, occupied by William Kelly as bailiff, and valued at £8. There were also two cottagers who paid 1s. each. The tithes were valued at £2 13s. 4d. In the town of Newtown there were a house, 80 acres of arable, 20 acres of pasture, and 1 acre of meadow land, held by John Moran at a rent of £4 13s. 4d. There were also 4 cottagers, who held by service, and gave each a hen and a sheep and a pig from every seven. The tithes were leased to John Ryan for £2. In Bullock there were 2 houses and 60 acres of arable land, which Patrick Bermingham and John Gahen held for £3 12s. 3d. There were also 7 cottagers who paid nothing. The tithes, which were collected in fish, were leased to Richard Edward at a rent of 16s. In Dalkey [? Bullock] there were a house with a bawn and 7 acres of arable land, which were held by John Lacy at 7s., besides 2s. paid to the Archbishop of Dublin, and 3 houses held by Anthony Shillingford, Donald M'Thomas, and Terence Mayne at 8s. 8d., besides 2s. paid to the Archbishop. Gilbert's *Chartularies of St. Mary's Abbey*. Vol. ii., pp. xl., 62-64.

1540—Maria Cusack, Abbess of Lismullen, surrendered its possessions, including a castle, a house, 8 cottages, 60 acres of arable, 2 acres of meadow, and 12 acres of pasture land, with 1 acre of copse and 2 acres of bog at Cornel's Court, valued at 46s. 8d. Archdall's *Monasticon Hibernicum*.

1541—William Walsh, of Carrickmines, gent, was leased by the Crown Kilpedder, in "the O'Byrne's Country." *Fiant*, Henry VIII. No. 240.

## St. Anne's Parish Church, Belfast.



1542—Bullock was leased by the Crown to Peter Talbot, gent, on his surrender of Powerscourt and other lands. *Ibid.* No. 283.

1542—Monkstown and its rectory were leased by the Crown to John Travers, Esq., at a rent of £24 5s. 2d. *Ibid.* No. 310. Travers was an Irishman, but left this country as a child. Possibly his father was the John Travers of Oxford, who in 1523-28 acted as a Commissioner of Taxation there, and was leased by the Crown certain lands in the neighbourhood. In 1534 one Travers was in the household of the Duke of Richmond, the natural son of Henry VIII., and was granted the profits of the fishing of the river Bann in Ireland. On the Duke's death in 1536 he was described as a "viewly" man, and was unmarried. Subsequently we find him serving in the army during the rising under Aske in Yorkshire, and engaged in military operations before Terouenne in the Netherlands. In 1538 he was included amongst persons "to be had in the King's most benign remembrance," and in the following year, while acting as "gentleman sewer," or groom of the King's chamber, he was given the office of pavilioner or serjeant of the King's tents, with a fee of £20. Towards the close of that year, he came to Ireland in charge of 100 foot soldiers with a petty captain, a priest, a drum, and a fife. It appears from a letter written by him at this time that he owned a house in London, and also a house and farm at Ipswich. A sister of his was then married to a Mr. Fitzwilliam, and another was married to a Mr. Anthony Fortescue. He did good service, both in Ulster and Munster, as captain of the gunners, "the best paid and worst ordered soldiers in the army," and stood in high favour with Lord Deputy Grey, who sent Travers to England with despatches the year after his arrival, thinking he would prove a friend to him at Court. See *Letters and Papers of Henry VIII. : Calendar of State Papers, Ireland, 1509-73.* Bagwell's *Ireland under the Tudors.* Vol. i., passim.

1542—The Dean and Chapter of Holy Trinity leased to Sir John Callan, chaplain, and Henry Moore, workman, a house at Kill-of-the-Grange with two parks, containing 5 acres, the stony acre of the black bush, an acre in the field called "Mymoks," Dermot Hanlon's acre, and a flax yard on the south side of "the Karryke." *Christ Church Deed.* No. 1189.

1542—The Church of Kilmacud, amongst other possessions of the Convent of Grancy, was given to the Lord Deputy, Sir Anthony St. Leger, in recompense for his services in the reformation of the country and establishment of the government. See notice of St. Leger in Archdall's edition of *Lodge's Peerage of Ireland*, vol. vi., pp. 96-101, and in *Dict. of Nat. Biog.* He was an ancestor of the Viscounts Doneraile.

(To be Continued).

## OUR LONDON LETTER.

**King's College, London.**—The Council of King's College, London, are inviting applications for the post of Professor of Architecture and Building Construction vacant by the death of the late Professor Banister Fletcher who was assisted in the work by his two sons, both of whom are still associated with the College as Lecturers. A feature of the work is now the "Special Course" arranged for students desirous of preparing for the A.R.I.B.A. and other examinations in one year instead of three, while the Architectural Studio affords the student every facility for preparing drawings for the former examination. The certificate of having passed the final King's College examination, including the Studio Course, exempts the student from several sections of the Society of Architects' examination, so that the general training is calculated to afford instruction far beyond what it is possible to secure in the ordinary routine of office work.

**Architectural Association.**—Judging by the wide scope of the subjects set down for the Discussion Section of the Architectural Association there should be no complaint of poor attendance or want of interest in the proceedings. The opening debate on October 13th promises to be of exceptional interest and likely to be productive of much difference of opinion, the subject being "The Registration of Architects" to which much attention has lately been drawn by the correspondence in the professional journals and by provincial meetings convened by the supporters of the movement in its favour, viz., the Society of Architects, representatives of which body have been specially invited to attend the debate.

The attitude of the R.I.B.A. with regard to this matter is well known, and the A.A. being so closely identified with the leading Society it is not difficult to forecast the tone they are likely to adopt, at the same time both sides of the question will be ventilated, and the result cannot but be productive of good.

At the Congress of the Royal Institute of Public Health just concluded at Blackpool, no less than two papers were devoted to this subject, and signs are not wanting that the Architectural profession is beginning to wake up to the fact of its unprotected state and to the desirability of taking steps to effectually remedy an acknowledged evil.

**Thames Embankment.**—A correspondent in "The Architect" makes the suggestion that the Thames Embankment should be made more attractive by the erection of open air cafés, bandstands, etc., and converted into a public promenade of which respectable citizens would not be above making use of instead of being, as at present, the resort of the homeless and more or less criminal class, and probably if this were a continental city advantage would long ago have been taken to turn this magnificent site to some account; possibly if some of the superfluous millions now spent on much too "free" education were diverted into some such channels as indicated the rising generation would be all the better off in more ways than one.

**School of Arts and Crafts.**—The Central School of Arts and Crafts in Regent Street has just entered on its fourth session and so much has its work increased that it has been obliged to acquire the adjoining premises to provide for the necessary further accommodation of students; it is essentially a trade school for actual workers and for those connected with the building trades. There are classes in architecture, metal work, lead work, stained glass, stoneworking, etc., and free lectures on the mechanics of construction. The fees are only half a crown a month, while apprentices and learners are admitted free. The school is under the charge of Mr. Geo. Frampton, A.R.A., and Mr. W. R. Lethaby, the various classes being conducted by experts.

**Premises in Cockspur Street.**—The London County Council have just completed the purchase of the premises occupied by Mr. Stanford, the well-known map seller, in Cockspur Street, for the purpose of making the much needed additions to their offices. The site was, in the eighteenth century, occupied by "The British Coffee House," the resort of many famous men principally of Scottish nationality. In 1770 the house was rebuilt by Robert Adam, the architect of the Adelphi, and so remained until 1886 when it was demolished for the erection of the present premises now in their turn to make way for yet another building.

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60 Upper Sackville Street, Dublin.

MORE PRESS OPINIONS.

**The General Advertiser.**—The last issue of the *Irish Builder*, dated 15th September, is a vast improvement on its predecessors. It is a paper that was unfortunately allowed to decline, but we now note with pleasure that it has been altogether rejuvenated and has started on a fresh career of usefulness. Its constant aim is to aid the development of Irish Industries and Crafts, and a paper with this object has long been required in Ireland. As it is also the only technical journal in this country, and practically reaches every architect, engineer, and contractor in Ireland, the *Irish Builder* offers to District Councils and all administrative boards just that direct technical medium for advertising which they seek with regard to building and engineering works. In this issue there are five splendid drawings of the new Belfast Cathedral, besides many other illustrations and much interesting matter. The whole get-up reflects great credit on the publishers, the Wood Printing Works. The offices are at 13 Fleet street, Dublin.

**Newry Telegraph.**—The *Irish Builder*—a journal devoted to architecture, engineering, contracting, arts, and handicrafts—appears as a new issue. It is, in every respect, an excellent technical journal, and the editor promises that no effort will be spared to make it a thoroughly up-to-date publication.

**The Magpie (Belfast).**—I am in receipt of what is practically a new issue of *The Irish Builder and Technical Journal* and think it greatly improved and even more promising. It claims to be the only technical journal published in Ireland, and there should be room for a paper of the kind. English building journals necessarily deal very little with Irish work, and one would think that all engaged in the building trade would like to know what is going on in their own country. In the copy before me there is a lithographic supplement showing the new buildings for the Scottish Provident Institution in our own city—quite the best design, by the way, which Messrs. Young & Mackenzie have turned out, and in striking contrast to the adjoining hideous Y.M.C.A. block. The letterpress includes various interesting articles, and among others, one on "Irish materials used in road-making" by Mr. James Munce, our Assistant City Surveyor. One sentence of this article made me smile. It is that in which he says he has on exhibition a whinstone square-sett that was under traffic in Chichester Street for over twenty years. I should think he would have little difficulty in exhibiting square-sets which has been under traffic in the city for over a century.

**Belfast News-Letter.**—The *Irish Builder* gives a description of the Belfast Cathedral, and four views printed on fine paper. These show the interior and exterior, according to the present plan, and also according to the original plan. There are also many items of interest to architects and builders.

MARKET PRICES.

OILS AND PAINTS.

		£ s. d.	£ s. d.
Colza Oil, English .. ..	per cwt.	1 4 3	—
Copperas .. ..	per ton	2 0 0	—
Lard Oil .. ..	per cwt.	1 9 0	—
Linseed Oil .. ..	"	1 1 9	1 1 10½
Neatsfoot Oil .. ..	per gal.	0 2 6	0 4 0
Petroleum, American .. ..	"	0 0 6 3/16	—
Do. Russian .. ..	"	0 0 5 5 8	—
Pitch .. ..	per barrel	0 8 0	0 8 6
Tallow, Town .. ..	per cwt.	1 4 0	1 5 0
Tar, Stockholm .. ..	per barrel	1 5 6	1 6 0
Turpentine .. ..	per cwt.	1 15 4½	—
Glue .. ..	"	1 14 0	2 18 0
Lead, white, ground, carbonate .. ..	"	0 19 0	—
Do. red .. ..	"	0 17 9	—
Soda crystals .. ..	per ton	3 0 0	—
Shellac, orange .. ..	per cwt.	3 4 0	3 5 0
Pumice stone .. ..	"	0 8 9	—

METALS.

Copper, sheet, strong ..	per ton	88 0 0	—
Iron, bar, Staffs. in London ..	"	8 10 0	9 10 0

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Classes will re-open on Monday, 25th September,  
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Applied Mechanics.	Carpentry and Joinery.
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Practical Mathematics.	Tailors' Cutting.
Building Surveying.	Elementary Instruction in Wood-
Building Construction and Drawing.	working Tools.
Elementary Physics.	Writing and Commercial Penmanship.
Sound, Light, and Heat.	English Grammar and Composition.
Electricity and Electrical Engineering.	Book-keeping.
Inorganic Chemistry (Theoretical and	Arithmetic.
Practical).	Shorthand.
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For Terms apply to the Owner,

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CIVIL SERVICE COMMISSION—Forth-coming Examination—Valuer and Surveyor (Second Section), Valuation Office, Ireland, (21-28) 12th October.

The date specified is the latest at which applications can be received. They must be made on forms to be obtained, with particulars, from the Secretary, Civil Service Commission, London, S.W.

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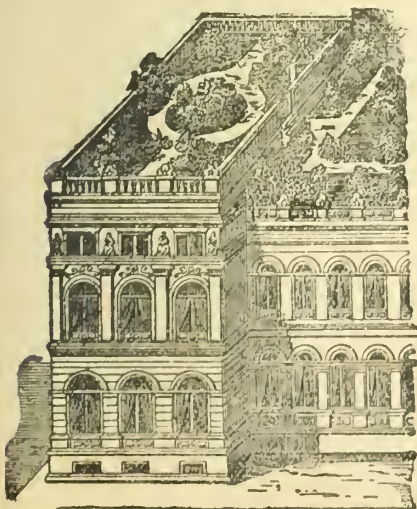
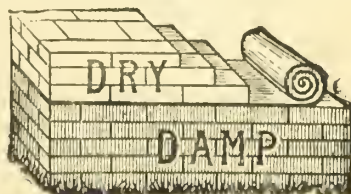
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Appointment	To whom	Salary	Last date
Clerk of Works ... ..	Parish of All Saints, Poplar ... ..	£4 4s. per week ... ..	October 2nd
Engineering Draughtsman ... ..	City of Nottingham ... ..	£160 per annum ... ..	" 9th
Architectural Draughtsman ... ..	City of Nottingham ... ..	£150 per annum ... ..	" 9th
Valuer and Surveyor, Valuation Office, Ireland ... ..	Civil Service Commission, London, S.W. ...	£120 to £450 per annum ...	" 12th
Assistant Civil Engineers, in H.M. Naval Establishments ... ..	Civil Service Commission, London, S.W. ...	£180 to £1,000 per annum ...	" 19th

## COMPETITIONS OPEN.

Design	Advertised by	Premium	Last date
School for 1,000 children, Blackpool ...	Clerk to School Board, Town Hall, Blackpool .. ...	— — —	October 17th

## CONTRACTS OPEN.

Work	For whom	Apply to	Last date
Cottages at Culoville Station ... ..	Great Northern Railway Company ...	Engineer, Amiens Street Terminus, Dublin ... ..	October 2nd
Steel Overline Footbridge at Newtown-stewart Station ... ..	Ditto Ditto ... ..	Ditto ditto ... ..	" 2nd
Cement, Pipes, Lime, Bricks &c. ... ..	Bray Urban District Council ... ..	Clerk to the Council, Bray ... ..	" 2nd
Spires to the new Church of the Sacred Heart, Omagh ... ..	Very Rev. Monsignor M'Namee, P.P. ...	Mr. W. Hague, 50 Dawson St. Dublin	" 3rd
Heating and Ventilation of Sligo District Lunatic Asylum ... ..	Sligo District Lunatic Asylum ... ..	Sir T. N. Deane & Son, 3 Upper Merrion Street, Dublin. ...	" 3rd
Waterworks and Sewerage at Mallow ...	Mallow Rural District Council ... ..	Clerk to the Council, Mallow ... ..	" 4th
Coastguard Station at Laytown ... ..	Board of Public Works, Dublin ... ..	Secretary, Office of Public Works ...	" 5th
Addition to the National Gallery ... ..	Ditto Ditto ... ..	Ditto ditto ... ..	" 6th
New Central Bridewell, and Offices in Chancery Street, Dublin ... ..	Ditto Ditto ... ..	Ditto ditto ... ..	" 10th
Killea Extension of the Londonderry Waterworks ... ..	County Borough of Londonderry ...	Town Clerk, Londonderry ... ..	" 10th
Main Sewers for the Knockaverry District	Youghal Urban District Council.. ...	Clerk of the Council, Youghal ... ..	" 12th

## TENDERS.

**BELFAST.**—For laying water-main, Knockbracken, 1st Section, Contract No. 27, for the Water Commissioners. Mr. L. L. Macassey, C.E., Westminster and Belfast. Quantities by Mr. Acheson Ferguson, Belfast:—

J. & W. Stewart, ... ..	£10,242 0 0	Laverty & Son ... ..	£5,585 16 0
Patterson & Son Ltd. ... ..	8,392 13 5	H. & J. Martin, Ltd., Belfast ...	4,058 0 0
Fisher & Lefanu ... ..	7,529 7 6	J. Hemingway ... ..	2,725 0 0
T. McMurray ... ..	5,859 0 0		

For the construction of two reservoirs, Old Park, for the Water Commissioners, Mr. L. L. Macassey, C.E., Westminster and Belfast. Quantities by Mr. Acheson Ferguson, Belfast:—

Patterson & Son, Ltd. ... ..	£19,914 16 0	Laverty & Sons ... ..	£14,000 0 0
J. & W. Stewart ... ..	15,456 0 0	Fisher & Lefanu ... ..	13,379 13 10
T. McMurray ... ..	14,686 0 0	H. & J. Martin, Ltd ... ..	12,590 0 0
J. Hemingway ... ..	14,370 0 0	Courtney & Co. ... ..	11,998 0 0

For the execution of sewerage works, &c., Balmoral District for the Corporation, Mr. J. C. Bretland, City Surveyor, Town Hall, Belfast. Quantities by Mr. Acheson Ferguson, Wellington-place, Belfast:—W. H. Campbell, Belfast, £4,791.

**BLACKHEAD.**—For erection of a lighthouse, on Blackhead, Co. Antrim, together with keeper's dwelling, stores, fog-signal house, outbuildings, walls, roads, &c., Blackhead, Co. Antrim. W. J. Campbell & Son, Belfast (accepted).

**BRAY.**—National Schools, Bray. Quantities by Messrs. Beckett & Medcalf. Architect, J. F. Fuller.

Hall & Son ... ..	£6914	McLaughlin & Harvey ... ..	£5829
Crampton ... ..	6761	Collen Brothers ... ..	5707
Bolton & Sons ... ..	5992	James Beckett ... ..	5540

**DALKEY.**—Mr. M. J. Allen's tender for the erection of 14 Artisans' Dwellings in the township, was accepted at £1,760. There were four tenders.

**DROGHEDA.**—For the laying of about 10,000 super. yards of granolithic concrete footways.—The Borough Surveyor:—

	Per Yard s. d.		Per Yard s. d.
B. McDonnell, Drogheda ... ..	4 6	S. McFarlane, Leeds .. ...	3 6
A. E. Mills, Dublin ... ..	4 6	G. Rome & Co., Dublin ... ..	3 6
C. Gogarty Drogheda ... ..	3 9	A. Walker & Sons, Leeds (accepted)	3 5

**DUBLIN.**—For precipitation tanks, sludge pits and other works at Pigeon House Fort, in connection with the main drainage of the city.

John Best ... ..	£126,339 18 8
H. & J. Martin ... ..	108,370 0 0
Pearson & Son, Edinburgh, (accepted)	94,003 14 9

For erection of new branch offices for the Star Life Assurance Society. Mr. A. Blomfield Jackson, architect 26 Mecklenburgh Square, London.

H. Pemberton ... ..	£15,350 0 0	McLaughlin & Harvey ... ..	£13,996 0 0
W. Beckett ... ..	14,590 0 0	J. Beckett ... ..	13,850 0 0
Bolton & Sons ... ..	14,460 0 0	Collen Bros. (accepted) ..	13,490 0 0

**EDENDERRY.**—For painting with two coats of paint all the woodwork and ironwork of the external portions of the workhouse and fever hospital, Edenderry. E. Watson (accepted), £40 os. od.

**ENNISKILLEN.**—For executing road approach, bank approaches, timber pier, and other works at Inismore Viaduct, Co. Fermanagh. A. Mair, Ballyreagh, Maguire's Bridge, £800 (accepted).

**GLEN.**—For sinking a well and erecting a pump in the village of Glen, Milford. J. M. Coach, Carryart, Milford (accepted), £31 6s. 9d.

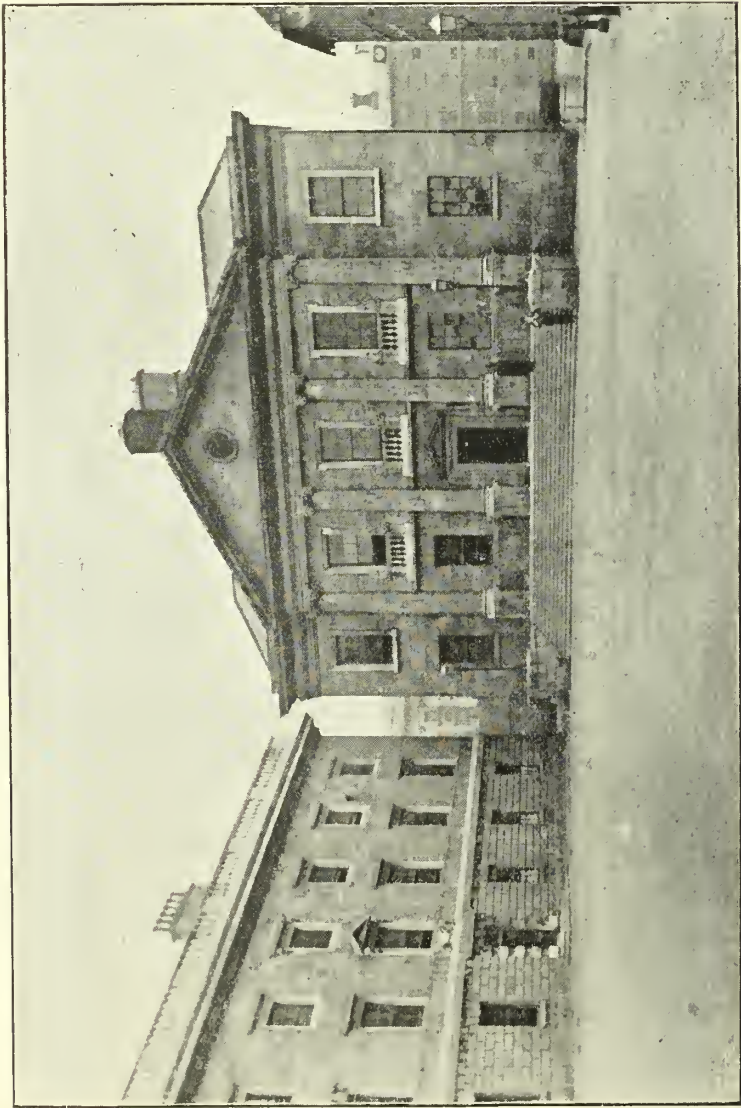
**GOREY.**—For alterations and additions to the west building of the workhouse, Gorey, for the Guardians:—

W. Fortune ... ..	£1,300 0 0
F. A. Mellow ... ..	1,100 0 0
J. Bryne, Gorey (accepted) ... ..	994 17 6

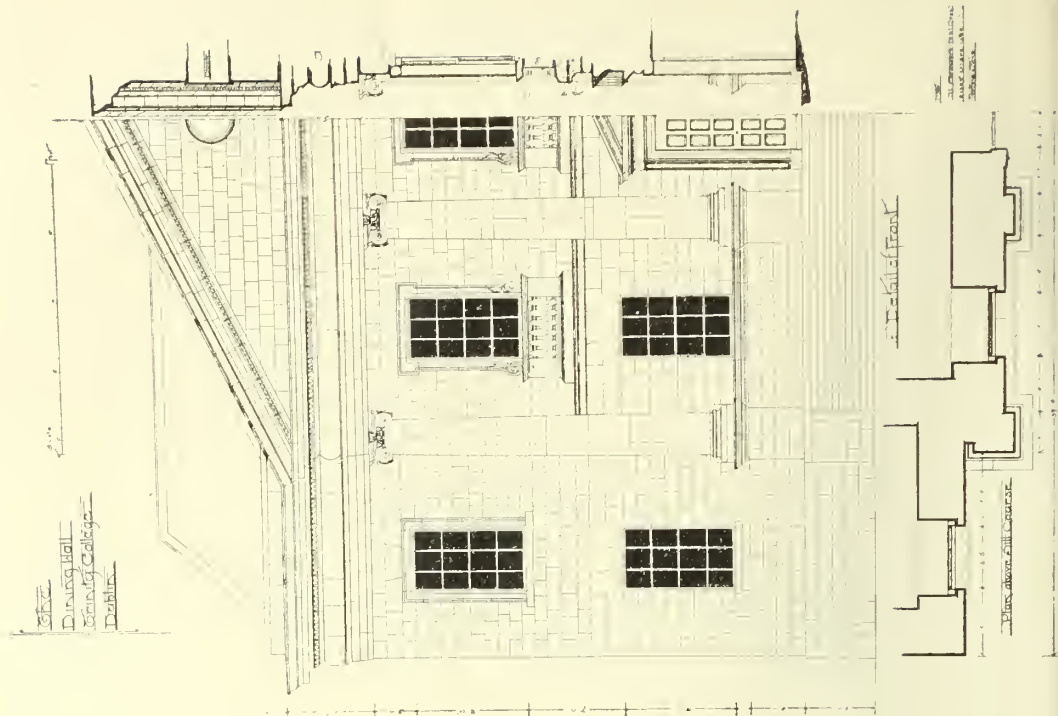
**INISMORE.**—For executing road approach, bank approaches, timber pier and other works at Inismore Viaduct, Co. Fermanagh. A. Mair, Ballyreagh, Maguire's Bridge (accepted), £800 os. od.

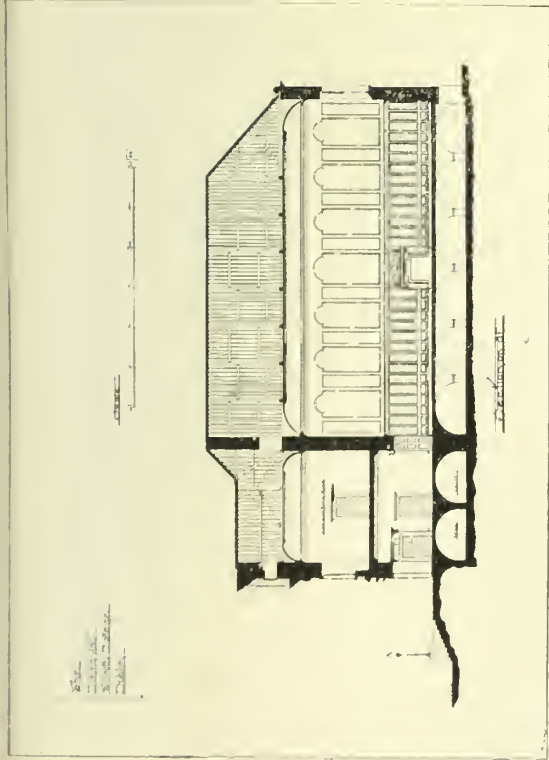
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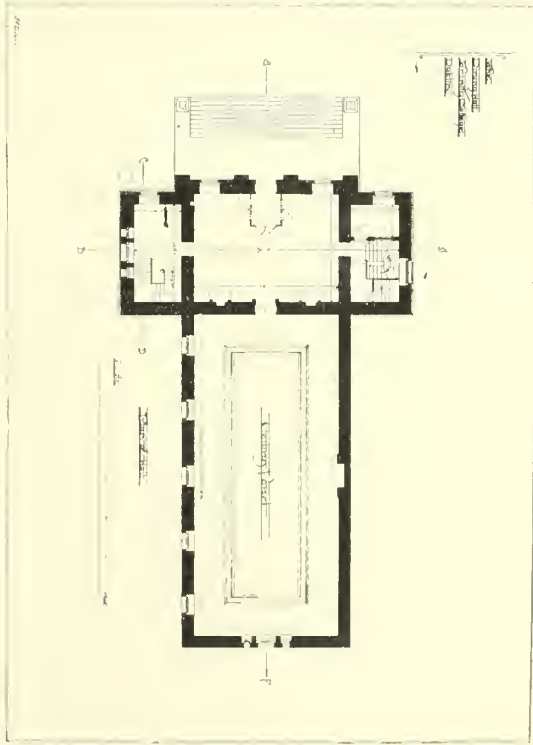


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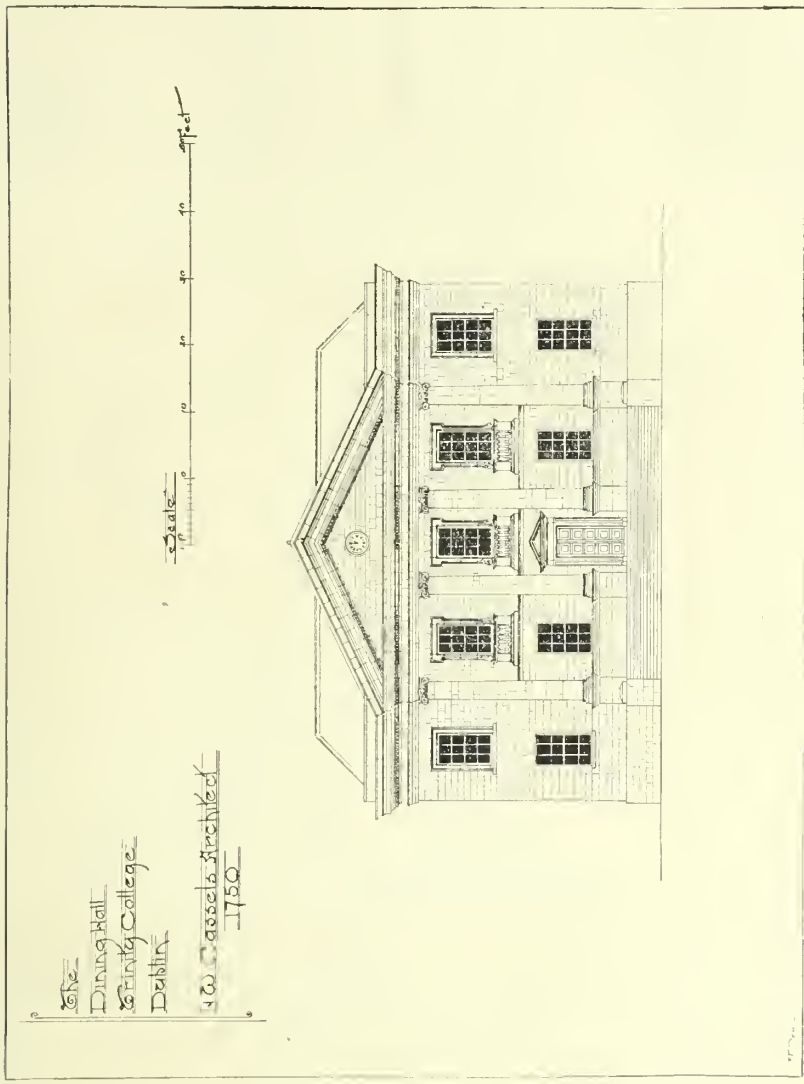




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## NOTICES.

The *Irish Builder* is published twice a Month, on the 1st and 15th, and may be ordered from any Newsagent, or direct from the Offices,—13 Fleet Street, Dublin.

We have also established a London Office at 15 Montague Place, Russell Square, W.C., and all English, Scotch, and Welsh inquiries concerning copies of the paper and advertisements should be addressed there.

It is the only technical journal in Ireland, and reaches Architects, Engineers, County Surveyors, Builders, Contractors, Artisans, Council Officials, Members of Trades Associations, and Public Libraries throughout the country. A specimen copy will be sent post free to any address on application.

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### Editorial.

Literary matter and drawings to be addressed to the *Editor*, and must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. We do not hold ourselves responsible for the opinions of correspondents.

Notes of works (especially contemplated works), contracts, reports, &c., are always welcome. Drawings and photographs are particularly acceptable.

### Publishing.

All business communications to be addressed to the *Manager*. Advertisements must reach the office two days before the date of publication. The charge for Contracts, Notices, Prospectuses, Competitions, &c., is 6d. per line. Other advertisement rates can be had on application.

### Payments.

Cheques and Postal Orders to be made payable to The Proprietor, *Irish Builder*.

We much regret that by an oversight we omitted to state in our last issue that the block for St. Anne's Parish Church, Belfast, was kindly lent to us by the *Belfast Weekly Telegraph*, one of the most go-ahead papers in Ireland.

## COMMENTS.

### Engineers for District Councils.

One immediate result of the new Local Government Act is that so-called engineers and architects are being appointed in various parts of the country by the newly-created Urban and Rural District Councils. The persons who compose these administrative Boards are apparently not over-burdened with intelligence, for they do not seem to have the least idea of the proper qualifications of such responsible officials. In several instances they have actually invited *tenders*, asking engineers to send in estimates for their services, and accepting the lowest offer. We need not refer to the recent advertisements of the Carlow, Glin, and Manorhamilton District Councils as cases in point; and at a late meeting of the Town Council of Portadown, for the consideration of a water-supply scheme to cost £15,000, one Councillor "thought they might save a little money if they issued advertisements inviting engineers to tender for the work." Most thoughtful man to think of the interests of the ratepayer in this truly conscientious fashion!

What are the qualifications of these cheap-jack engineers and architects, who accept such princely salaries as £100 a year and who even offer to carry out work at the unheard-of commission of 10s. per cent? Are they professional men at all, and where did they get their training? They accept appointments which are usually "terminable at the pleasure of the Council," which carry with them the stipulations that they must perform their duties in person, pay their own travelling and incidental expenses, provide their own offices, and be at the beck and call of every councillor no matter how exacting he may be. No self-respecting professional man would accept such conditions, and we can only conclude that these persons must be nothing short of impostors, who can blind the eyes of the Public because the present state of the law permits any fool to put C.E. to his name. They slave for any nominal salary, and take the bread out of the mouths of fully-qualified architects and engineers, who have spent much money and devoted years to acquiring a knowledge of their profession in order that they might obtain a livelihood. If a doctor or a nurse is appointed to take care and look after paupers the Local Government Board must have certificates of proficiency produced before they sanction such appointments, and they must be satisfied

that the applicants have been properly trained and are properly qualified to discharge the duties of the offices which they seek. Why, then, is not the same test applied to architectural and engineering appointments? The want of organisation in our profession is simply lamentable, and consequently we are buffeted about at the mercy of Bumbledom.

The Institution of Civil Engineers, Ireland, should take up the question at once, and while its primary duty is to protect the profession, it also has a higher object, and that is to shield the Public.

We would likewise call the attention of Mr. P. C. Cowan, B.Sc., M.I.C.E., Chief Engineering Inspector to the Local Government Board, to the matter, and ask him to do his utmost to remedy this disgraceful state of affairs. Mr. Cowan has had a splendid record, and he is the right person in the right place. We shall be very much surprised indeed if he does not now exert his power and authority to remedy such abuses.

#### Still Made in England.

The remarks we made in our last number about so many English firms obtaining orders from Ireland which ought to have been received by Irish houses have excited a great amount of interest, and one gentleman has written to us all the way from Southampton confirming us in the views which we then expressed. Our tradesmen have not yet realized the why and the wherefore, but everyone seems to be loud in condemnation of the practice, as was evinced at a late meeting of the Irish Industrial League. There was a large gathering, and a resolution was adopted deprecating the action of Lord Carysfort for having given the preference to foreign manufacture in the building and furnishing of St. Saviour's Church, Arklow. A discussion also took place respecting the importation of the organ for St. Patrick's Church, Dundalk, and an appeal was made to the clergy and people of Ballinasloe to use Irish materials and Irish labour in rebuilding their church, recently burnt down. Why appeal to the "clergy and people" when the architect is the person who specifies what materials are to be used? The organ for Dundalk will cost £2,000, and is being supplied by a London firm. We are not altogether surprised that Irish firms were here passed over, as they do not attempt to push their goods, or as a Dublin firm of organ-builders said to us, "We never advertise."

It was only last week that an English gentleman wrote to us making enquiries about Irish bricks, and saying there was a good opening for them in the south of England. There are lots of brickworks in Ireland, but why are the proprietors content to hide their wares in absolute obscurity? They would find an extensive sale for them if they only brought them to the public notice through a suitable medium. A syndicate is now being formed to open out more granite quarries, particularly in Ireland, as the demand for granite setts has steadily increased in recent years, notwithstanding that wood paving has become so common. "Unfortunately," writes a well-known Irish daily paper, "the Irish holders have been found very impractical in their views, and negotiations have lately been hanging fire." Just so, that is exactly our own experience.

As an instance of how keen English firms are in pushing business we may relate the following facts, which we experienced thirteen years ago while serving our pupilage in an architect's office in an Irish city. Our master had a large building, which he was about to erect, illustrated in an English technical journal. This paper was published in London on Thursday afternoon, but did not reach our office till Saturday morning; yet several English firms had noticed the proposed building on the day of publication and promptly posted off catalogues and letters, which reached the office on Friday morning, or a day before the journal itself had been received. This was smart work, and at least

two of the firms in question obtained well-merited orders.

When will Irish manufacturers take these lessons to heart, and endeavour to seriously compete with the Englishman in his efforts over here? We have no doubt that our advertisers from across the Channel keep a sharp eye on our "Building News" and "Engineering News" columns, and are first in the field with requests for orders. We will always encourage Irish manufacture, but our genial countrymen must mend their ways and waken up to business-like methods.

#### Fate of a Belfast Church.

Another old ecclesiastical landmark of Belfast is likely soon to disappear in the Second Presbyterian Church, Rosemary-street, which has just been offered for sale by public auction. The edifice is really a part of the First Presbyterian Church, which is claimed as the "Mother Church of Belfast Presbyterianism." The first church dates from the ministration of the Rev. John Baird, chaplain to the Scotch troops who assisted in the defence of the city against the Catholic insurgents in 1642. A second meeting-house was built immediately in the rear of the first in 1708. In 1790 the church was rebuilt, with accommodation for about 800 worshippers. The Second Congregation was the first in Belfast to have an organ, which is said to have been played upon by Handel. The church is Classic in style, with Ionic pilasters and a pediment in front; and the congregation have removed their place of worship chiefly because the population of the city has removed from the centre into the suburbs.

#### Widening of Wexford Street, Dublin.

A fresh impetus has been given to the movement for the widening of Wexford Street and Redmond's Hill, which was mooted so far back as May, 1896. The proposed improvements consist in the widening of the east side of Wexford Street and Redmond's Hill beginning at Protestant Row, and carried down to the corner of Digges Street, a distance of 496 feet, including the width of Cuffe Street and Cheater's Lane. The width of Wexford Street at the corner of Protestant Row will, if the proposed improvement be carried out, be increased by 10 feet, and at the corner of Cuffe Street by 5 feet. Similarly the width of Redmond's Hill at the corner of Cuffe Street will be increased by 10 feet 6 inches, and at the corner of Cheater's Lane by 6 feet 6 inches. The gross cost of the improvement will be £50,000.

## CLASSIC DETAILS AND THEIR APPLICATION.

By G. A. T. MIDDLETON, A.R.I.B.A., M.S.A.  
Author of "House Drainage," "Surveying and Surveying Instruments," &c.  
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#### VI.—CLASSIC TIMES: THE ARCH.

Though known to previous races, the arch was first used as an architectural feature by the Romans, and it was employed by them to so large an extent that arcuated construction was far more common in Roman work than was trabeated. By its employment large spans could be bridged even where the only available material was a stone of small dimensions, and vaults and even domes were rendered possible.

In spite, however, of the great gain thus secured, and of its large employment by the Romans, they did not spontaneously develop an architecture based upon the arch, but imported the trabeated forms of Greece; and thus came about the reign of an architecture whose construction was arcuated and whose ornament was trabeated.

At first always, and afterwards generally, this was boldly acknowledged, the result being somewhat like that of the Theatre of Marcellus—the ornamental trabeation being evidently a veneer displayed as such, the arches being kept

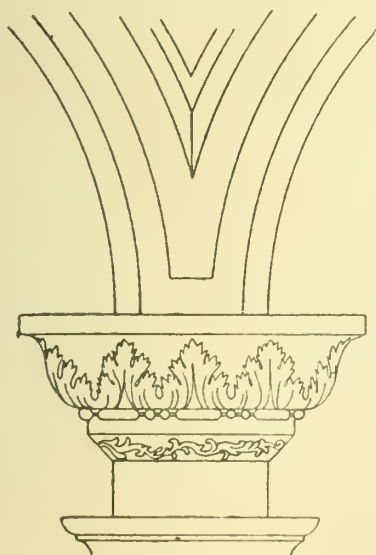
distinct and springing from imposts of their own, mere mouldings passing at the springing level round the supporting piers, and interpenetrated by the columns of the applied Orders. With careful proportioning, the effect was good, and, in spite of the entablatures being apparently carried principally by columns, which in reality did no work at all, and at intermediate points by just the crowns of arches which did all the work, there has been but little outcry against the practice.



Arch from the Porch to the Vestibulum,  
Palace at Spalatro.

Much less defensible were two other methods of combining the Orders and the arch, which came into use in the later Roman period, and of which illustrations are given, both taken from the Palace at Spalatro. In the arch to the porch of the vestibulum it will be seen that the horizontal entablature has been bent round to the arch curve, as if solid stone were pliable; and in reality the effect is much worse than this drawing would lead one to expect, as there is a pediment over, the raking lines of which clash with the curved lines of the arch.

Bad, however, as this bending of the entablature was, it seems to have given the inspiration for the true method of decorating an arch by mouldings, as in Romanesque and Gothic work, even the hood-moulding being present in the form of the cornice. An intermediate step towards this, indeed, is seen in the upper niches to the Porta Aurea at Spalatro, where the detached columns are each crowned with a complete entablature (debased, of course), forming a



CORINTHIAN CAP HERE

Impost and Archivolt of Upper Niches,  
Porta Aurea, Palace at Spalatro

species of deep abacus above the cap, from which the arches spring—a method of treatment which was by no means uncommon. It can rarely, if ever, be considered satisfactory, and certainly the whole meaning of the entablature must have been lost sight of before it could have been dealt with in such a way; but its interest is considerable as a stage in the development from the Classic of Rome to the Byzantine of the East and the Romanesque of the West. In fact, in the example before us there are already indications of Byzan-

tine feeling, in the reintroduction of the spiked acanthus, in its very low relief (or, rather, in the slight sinking of the background upon which it rests), and in the use, immediately above the architrave, of a splay instead of a moulding, and this enriched with a scroll completely wanting in design.

With neither the Eastern nor the Western styles which arose upon the remains of the Roman can the student of Classic work have much concern, and to him Classic architecture may well be said to have died with the migration of the seat of empire to Constantinople, to be revived only in the time of Brunelleschi.

(To be continued.)

## DUBLIN FOR THE ARCHITECTURAL STUDENT.

AN ADDRESS TO MEMBERS OF THE A.A. OF IRELAND, 1897.

By THOMAS DREW, F.R.I.B.A., PRES. R.I.A.I.

Enough has been said—and more than enough—of the disabilities and grievances of those whose architectural lot is cast in this somewhat isolated old provincial capital. There is a great deal to be said on the other side. Is it nothing to live in a pleasant city with a good climate and a beautiful country environing it, in a city of 350,000 people, too large to be provincial in a vulgar sense, not too large to be sociable; abounding in companionship of many who are following literary, scientific, artistic, musical or antiquarian pursuits; with sympathetic welcome for every man whose tastes may draw him into congenial bye-paths? Has it not fine libraries and museums, and some specially unique ones, ancient records, MSS., etc., etc., all lying open, free to all comers, and for the most part on Sundays as on week-days? To mould and shape the wild, untutored architect-man through a liberal education, and to inspire intellectual instincts in him, there is no influence wanting. That is something.

And when it comes to architecture proper, and comparison is to be made with some other cities of the Empire, is Dublin despicable? For the architect, is there not something in the luxury of living in an old historic city, having many dignified and respectable monuments—a local metropolitan city of past times with much picturesqueness of architectural effects, spontaneous, unstudied, of unconscious evolution, as it could not be in any brand new city? Think of Birmingham, Leeds, Bradford, Wolverhampton, even Manchester, or our northern Irish manufacturing City of Belfast; would they be as good as this? What is there in such cities to inspire an architectural student with one spark of enthusiasm as he comes and goes in their streets?

London has, of course, its amazing wealth of noble and illustrative old architecture, from its Abbey of Westminster through all the gamut of styles of the Middle Ages up to the grand chord of the Renaissance in St. Paul's Cathedral; but it is greatly scattered. It is hard to be found out by the student in his limited leisure. He does not, as a matter of fact, seek it out. It is all overflowed by a teeming modernism and the sordid flood of building of a new old city.

Edinburgh has its charms, and they are not in the category of those of any other city of this old land. It has its wonderful beauty of picturesque, almost theatrically-imagined groupings of mountain and architecture and aerial enchantment, though one may think at times of a vision of Durham valley to compare with it, seen once, as I have seen it, under a supernatural effect of heavenly beauty. If there be not romance, history, and pictorial charm in the architectural grouping of Edinburgh to inspire a student as he passes through Prince's Street to his day's round of mornings, and returns in its sunset effects of evenings, there is

no spirit within him. Its architecture, however, taken soberly, in items, is of moderate interest and value. Clear cut out against the sky, on the Calton Hill, is a fragmentary reproduction of ancient Greek architecture—a fine thing but exotic on Scottish soil. Looking another way is a finer monument—the towering pile of Edinburgh's ancient fortress. It has an ancient cathedral, interesting and somewhat characteristic of Scottish peculiarity, but not a great or grand church. It has a modern cathedral, too, of nice and respectable architecture, but of limited interest. The Scott monument is a beautiful and happily placed composition withal its barbarous detail, the untutored genius of its architect putting to shame many professors of cultured and academic design. So on, one might go through the monuments of Edinburgh, taken as educational examples for an Art student, without finding any which are great. What it has, is however piled together to make an incomparable Edinburgh, an architectural dream for the architectural scene painter and poet.

Give me DUBLIN in fair comparison with other cities of our three Kingdoms, as a satisfying home for a student of architecture if he will only open his eyes. It has in a small circle of streets good architecture, ancient architecture, highly illustrative of architectural styles. It affords groupings of architecture unworked and unpainted, which might make the fortune of an architectural artist.

As to architectural study, I do not believe in a chronological system: that is, beginning at the beginning—say, starting with the bee-hive hut or oratory of the early Celtic ænóbite, and working the way through the centuries up to Fountains or Canterbury; or, after the pedantic method of Chambers, concerning ourselves first with the wigwam of the unsophisticated savage, and then with the Temple of Jupiter Stator (as we were used to call it) as a half-way house, staging on to Sir William's own refined and carefully figured-out eighteenth century English work.

Our unequalled English language is as glorious a heritage as our English architecture, and affords an analogy. Who studies English literature according to such pedantic method? We begin with the study of correct vernacular English. If the student is a philologist, he travels backward into the delightful eighteenth century English of Addison, Steele, Johnston, or our own Oliver Goldsmith—farther back through Milton to the glorious literature of the Elizabethan era and the English classic Renaissance—Spencer, Shakespeare—further back to Chaucer, representative of English middle ages—further, as the philologist pursues his study, it is ever backward through the language of the Norman, Saxon and Celt, Roman, Greek, Hebrew, Sanscrit, to the origin of speech.

The Dublin student may profitably begin his course with latest Dublin architecture, i.e., Dublin vernacular, which is to be found in such thoroughfares as Dame Street and College Green. There are not wanting respectable, and even bold and striking specimens of the modern architect in various moods. Criticism stands silent, for the designers of most of these modern notable buildings are yet with us. It may be said that there is to be studied a good deal of refinement of design. It is at least for the student to exercise criticism as to what is congruous, what incongruous, what to imitate and what to avoid. All study, however, should be in generous and Catholic spirit. It is a characteristic evil habit of smart Dublin people to be Heaven-born critics of architecture as of other arts of which they are particularly ignorant. Among professional architects carping criticism is a hateful thing.

After the vernacular or up-to-date buildings of Dublin, the student falls back on the main architectural wealth of the city, which distinguishes it, and sets its stamp on it all over—its Classic architecture of the eighteenth century. There is no example that is absolutely uninteresting, and it has a characteristic of its own in abounding beautiful deco-

orative details imported into it by the colonies of Italians and fugitive Huguenots who made Dublin their home in the last century. There is much variety of genius evinced in the works of different architects. These qualities give an interest in the lives and personalities and histories of the buildings of these past masters. To one who has made a study of them for thirty years they become instinct with life. For myself, I could nearly persuade myself that I knew Francis Johnston, architect, as a boy, and had a pinch of snuff from him. Mr. Gandon, the gay and well-mannered French gentleman, I seem to have known. Mr. Cooley I am not well acquainted with; but as for Dean Swift, who cast his keen epigrams and gibes about every public building of his time in Dublin, he is a familiar everywhere. I can believe I have met him one day in Sheepe Street, going by way of the Castle steps to the Rose Tavern in Castle Street to sup with his knot of the Friendly Brothers of St. Patrick. Arrived at Castle Street, with a side glance he takes in that something is being done at the rival cathedral, and relieves himself by an improvised gibe at his archbishop:—

Cursed Cobbe from Christchurch the Cross has pulled down,  
And planted what still he more worships—the Crown.

As he turns in the opposite direction where a new gateway has been added to the upper castle yard it is but to observe that it is surmounted with a petty statue of Justice, which serves to point another gibe at ruling powers—

“Her face to the Castle, her back to the people.”

Many of such yet-remembered epigrams hang about the buildings of Dublin, more specimens of which I may recall hereafter. They add their share of interest when perambulating the streets.

Yet another characteristic in which Dublin “has the pull,” so to speak, over the new British town of commerce is the presence of picturesque and pictorial capabilities. About its streets and in its cathedrals are bits of pictorial surprises: architectural forms to which time has imparted a happy and softening glamour of colour. They wait for the architect artist when he will break away from the monotony of his squares and drawing-board. Some have asked impatiently where is the beauty to be seen for instance, and the answer is—everywhere, if you have not been Heaven-afflicted with colour blindness at your birth. Cultivate the faculty of realising beauty by the wayside. Think of what an architect like Ernest George could make of pictorial Dublin. Some have had the privilege, some years ago, of seeing a collection of George's drawings at a local exhibition. Study what such an artist would make of a commonplace London thoroughfare—say, familiar Bow Steeple—familiar objects, common cabs, and commonplace shops, when the over-familiarised eye would see nothing in passing by to admire. Mark how the artistic intelligence takes it in, with a delightful play of colour and form and sky, warm reds, and pleasant-toned greys.

There is one piece of advice that may be interpolated here. Never study Irish street subjects anywhere in wet or gloomy weather. Local colour in all Irish towns, and light and shadow—which can be as lovely there at times as anywhere in the world—is only paintable when skies are bright, and roofs and stone and bricks and streetway foregrounds are dry.

And if it be asked by some of the sightless ones where they can be directed to a subject, I should say—Pass the short distance from one cathedral to another as you leave Christchurch by Nicholas Street, and, as you cross the line of the old city wall at Back Lane, take in the picture that squalid, picturesque street makes, with Minot's great steeple towering in a sunny haze in the centre, and the pent-house roofs of the middle distance, and the foreground street strewn with parti-coloured wares, vegetables, old clothes, and fish and meat—a busy, lively scene of squalid Dublin life, but a picture subject. Or look about the cathedrals where a water-colour artist may find a score of subjects

(always premising that he has bright light), or take even the upper Castle yard; not much architecture there, but quaint and Dutch-like, and lovely in local colour when the sun shines bright on its north side. Everyone of us cannot go to Rome, or Vicenza, or Venice, but we might find such subjects as they furnish under like sunny effects of skies in several groupings of our Dublin City Hall, the Houses of Lords and Commons porticoes, and about the precincts of Trinity College.

There may now be said something of the names and personalities of the eighteenth century architects of the English Renaissance, who set their mark on Dublin in an era of passing prosperity and metropolitan existence, under the art patronage of a local aristocracy, with a native parliament. I regret that few of them were of native extraction. One of the earliest who set his vigorous impress on a characteristic Dublin was "made in Germany."

Richard Castles, Cassel, Castle, or Castel, was invited to this country by Sir Gustavus Hume, of the County Fermanagh, says the record. He was a good specimen of a trained Palladian architect, and must have had some genius for construction, for he constructed the Newry Canal and built the first stone lock in Ireland; but, *teste meo*, carpentry was not his forte. The great Round Room of the Rotunda buildings was among his achievements, and I can say that the original carpentry of that roof, over a circle 80ft. in diameter, is one of the most imbecile and helpless essays at covering such an area as I have ever seen.\*

The name of CASTLE brings one in a somewhat inconsequent way to gossip about the first and greatest of Dublin's eighteenth century monuments which Swift, in his pleasantly caustic manner, begins by qualifying as "a building large and lofty" and goes on—

Not a bowshot from the College,  
Half the globe from sense or knowledge,  
By the prudent architect  
Placed against the Church direct,  
Making good my grandam's jest,  
"Near the Church"—you know the rest.

This is the famed Parliament House of the Kingdom of Ireland, and the terrible Dean goes on, in his scorn of its legislators, to consign them with his good will to a warm location, and would contemptuously permit them—

Let them, when they first get in,  
Sell the nation for a pin.  
Let them rave at making laws,  
While they sit a-picking straws.

Whatever the legislators may have been, they started a fine monument on a noble and liberal scale about 1728-9. They cleared away old Chichester House, with its gardens running down to the Liffey, and laid the foundation of the Irish House of Parliament. The question is naturally asked: who was the original architect? and here, as history repeated itself in the later building of the Imperial Houses of Parliament, we have a professional scandal and controversy. Captain Edward Lovat PEARCE, Surveyor-General, gets the credit in official records; but even in his day there were detractors—one especially who, in correct Latin verse, plainly shadowed the existence, 167 years ago, of the more lately known architectural ghost! Castle, or Castellus, as he calls him, he plainly says was the real architect-ghost if people only knew it. A young captain of Neville's troop of Dragoons, and straight from campaigning in the Low Countries, must have been a very remarkable young military man if he had time to acquire such erudite and academic knowledge of Classic architecture as is evinced in the beautiful half-quadrangle court of the Bank of Ireland, with its grand flanking pedimented wings and excellent detail. I don't believe in Captain Pearce. The ghost was somewhere.

\* In connection with the study of roofs to be made in Dublin buildings the student is advised to give attention to the roof over the round room of the Mansion House, a circle of roof in diameter. It is without lateral tie from the wall-plate to the apex, unpurlined, unstrutted and stable. It is a remarkable but very simple construction, of which detailed drawings would be interesting. It is credited to an architect named Semple, and was said to have been built up within six weeks for the City Banquet given to George IV. in 1821.

We are carried back for a parallel to an official superstition of our own day attaching an innate and Heaven-born genius to the corps of Royal Engineers. We carry back our memory to a young Captain Fowke, R.E., architect born not made, without any architectural training, and who, under a South Kensington ghost system, developed the "Brompton boilers" of 1863, and also spoiled an able architect's design for our Irish National Gallery.

The history of the grand complete design of this Bank of Ireland as we now have it is curious and humiliating to our scholastic prejudices about "composition." In fact, no one designed it. It "grew" by a series of happy accidents, or rather, the four or five architects who in a century's course followed Pearce or Castle, were wonderfully sympathetic and self-suppressive.

The original conception was but the Centre Courtyard design, flanked and hampered by mean houses abutting on each side. Daly's famous club-house shouldered it on the west; other mean neighbours upon the east, for Westmoreland Street and College Street were not to come for eighty years after.

The first architect to go beyond this was Robert Parkes, who in 1787 had the ground cleared for him of Daly's Club, and Foster Place became possible. With great judgment he invented the quadrant sweep, in his day an open loggia of detached Ionic columns, curving towards the western portico which now fronts Foster Place. A little later, James Gandon had the chance to erect a Lord's entrance at the east. He followed Parkes' idea of the quadrant sweep, but in his work treated it as a solid plain wall with mock window recesses. I have lately deposited in the National Museum, Gandon's original drawing by his own hand which makes this clear. We all in Dublin know the story of him and the use of Corinthian columns under an Ionic entablature in his west portico, and his reply when he was twitted with questions as to what order of architecture this was. "The order of the House of Lords and be d——d to them."

The story is *ben trovato*, but any architect sees the good sense of Gandon's procedure and discounts the humour of it. He used Corinthian columns of choice of his own where the ground fell from the front, and so avoided obstructive bases and pedestals which would have of necessity been entailed by Ionic columns ranging all round. If any superior critic says that the architectural facade facing College Street on a fine, frosty, sunny morning is a stupid solecism, and not a fine congruous and satisfactory composition to do an architect's heart good to look at, I had rather not know so pedantic and fastidious a person.

In 1801, when the Bank purchased the poor played-out legislative shop from the Government for £40,000, some other "accidents" were the making of the design. There was a competition of architects. One, Baker, a drawing master and self-styled architect, is given credit for this. I do not believe a word of it. The marks of the hand of this audacious drawing-master architect are elsewhere to be seen at Christchurch and at St. Audóen's, and prove him an impostor and of accursed memory.

Francis Johnston, who carried out the alterations for the Bank in 1802, was at least an architect, if a modest and unostentatious one. As a first improvement, Johnston saw his way to making the two quadrant sweeps correspond by building up a solid wall behind Parkes' Quadrant Collonade on Foster Place side, and by adding three-quarter engaged columns to Gandon's quadrant on the College Street side. It scores for Johnston to have had so much good judgment and common sense. Some architects of our day would have seized the opportunity to exhibit their original genius and record it. They would probably have cut holes in Gandon's wall and interpolated Venetio-Gothic windows and balconies inspired by Ruskin's stories of Venice, and have spoiled another corner of Dublin. Another happy touch of Johnston's to the building was the abolition of the glass windows

in the great central portico, incongruous with its classic dignity and reflecting little glittering lights from the old-fashioned small panes of twisted crown glass of the description that still lingers in Dublin. A top-lighted Banking office behind the screen wall dispensed with side windows, and so came about that fine solid monumental wall on which the pillars of the portico project such grand shadows in sunlight and moonlight.

Castle left his mark all over the country. Among his best known works are the older part of Leinster House, Tyrone House, the original Rotunda Hospital and Round Room, and many houses of the nobility and gentry of his day. One who is interested may meet his work in unexpected places up and down the country. There is no mistaking Castle's vigorous detail when you meet it, carried out with such artistic ability as his following of French and Italian colonists, carvers, modellers, iron workers, or stucco workers, did for him. Of the ordinary sort of Castle's work in private houses, near and convenient examples are of easy access, such as Ely House, Ely Place, the Church Representative Body's House, St. Stephen's Green, E., part of Leinster House, Tyrone House, and a fine old house in Henrietta Street, with a grand hall and staircase, now being dismantled and degraded into tenements.

Castle had a great practice, and was a benevolent and thirsty soul, who took a great deal of interest and whiskey punch, it is said, with his friend, Dr. Bartholomew Mosse, during their promotion of the first lying-in hospital of the kingdom. He took one bumper too much for his health's sake one night when down at Carton on business for the Duke of Leinster, and died suddenly in 1751, and was buried under the amazing big yew tree in Maynooth Churchyard.

While this bold architecture was being raised at the Parliament House the university was rebuilding Trinity College on the opposite side of the street in a tamer yet correct manner. Sir William Chambers (irreverently known in the office in the days of my youth as the "Cocker" of architecture, and whose big folio as an authority ranked with Holy writ) was the architect of new Trinity College, which superseded the Elizabethan buildings, and wiped out the last remnants of the Monastery of All-Hallows. His work was being built about 1770, when Parkes' and Gandon's work over the way was going on. Chambers' facade towards College Green stands on the lines of the old Elizabethan brick building which preceded it. Parliament Square with its Chapel Hall and Rectory, is Chambers' characteristic work. He never visited Ireland. He sent a good sketch model of his design, which may still be seen in the College, and the plans and specifications were sent over by him and paid for at the correct  $2\frac{1}{2}$  per cent. His Casino at Clontarf for the Earl of Charlemont is illustrated in his big folio.

Thomas Cooley is the name of a Georgian architect, to be held in as great respect as those before mentioned. It was a competition that brought him to Dublin, and it was for the Royal Exchange, now the City Hall. There was the usual scheming and jobbing and working the oracle for friends, just as it might have been in our own century. I suspect there was an honest assessor. Thomas Cooley, of England, won the game with the best design. Thomas Sandby was placed second. James Gandon, run for the job by the all-powerful Beresford family, came in but third.

Space would not admit of dwelling on this work of Cooley's. It is, in a word, a refined and well balanced design of a master of English Renaissance architecture. It has but one crowning defect in a miserable ballustrade stage. Cooley served his time to a carpenter, and the poor wooden stair ballusters wrought in stone, are perhaps a reminiscence of his earlier craft. Cooley also was the designer of the Courts of Law—a remarkable building. He died before it was well begun, and his competitor, Gandon, finished it, and, improperly, is generally credited with the whole authorship.

(To be Continued.)

## BUILDING NEWS.

**Armagh.**—A new Post Office is about to be erected at Armagh, and tenders must be sent in to the Board of Public Works, Dublin, up to the 21st inst.

**Athlone.**—The Guardians of the Athlone Union have decided to have the workhouse heated by steam-pipes.

**Ballydehob.**—A new schoolhouse is about to be built at a cost of £180.

**Bangor.**—Building operations on an extensive scale are proceeding in Bangor and Ballyholme, Co. Down. At the former place a new hotel, called "The Burlington," is about to be put up at a cost of £1,400, and there will be twenty bedrooms. The architect is Mr. J. G. Lindsay, Glengall Place, Belfast, but the builder is not yet selected.

**Belfast.**—The foundation stones of the proposed Magdalene Church, Donegall Pass, were laid a fortnight ago, there being four stones. The architect is Mr. S. P. Close, A.R.H.A., Donegall square, and the builder is Mr. James Kidd. The church will be erected on the site of the old edifice, and the Gothic style of architecture has been adopted throughout. The church will be 106 feet by 75, and will accommodate about 700 persons. The cost of the structure will be about £5,000, which will include vestry and adjoining halls, &c. The building will be of local stone, with Scotch white stone dressings to windows, &c. The internal stonework will be Bath stone throughout, and the woodwork of the entire building will be best polished pitch-pine. The church will be heated on an entirely new method of the hot-air system, and the lighting throughout will be electric.

It is proposed to erect a lunatic asylum and remove thereto all the insane from the workhouse.

The new Victoria Hospital will be situated towards Grosvenor street and Falls road, and is estimated at £100,000. The architects are Messrs. Henman and Cooper, of Birmingham, and the quantities are now being taken out by Messrs. Stephens and Sons, Belfast. The late Dr. Cuming spoke in high terms of the entire planning and general arrangements, and the Committee concurred in his views.

The new church for the congregation of Fisherwick Place Presbyterian Church is making progress, as the skeleton is half-way up. It is being built on the site of the Belfast Nursery on Malone road, and is Decorated in Gothic style. The work was won in competition by Mr. S. P. Close, A.R.H.A., architect, Donegall Square. The contractor is Mr. R. Corry, and the cost will be £16,000.

**Carlow.**—The "Catherlogh" Bazaar was held recently to provide new and enlarged schools for the 500 children under the care of the Presentation Nuns.

**Clones.**—Fifty pounds have been sanctioned for improvements at the Methodist Church.

**Culmullin.**—Funds are being raised to complete the decoration and painting of the Catholic Church.

**Cushendall.**—A new Presbyterian Church was recently opened at Cushendall, Co. Antrim. It is constructed of stone, and Early English in style. Mr. William J. Fennell, M.R.I.A.I., of Belfast, is the architect, and the builder is Mr. Hugh M'Cann, Ballymena.

**Draperstown.**—A site has been selected at Draperstown for the erection of a central creamery with Sixtown to the west, and Fallaghloon to the east, as auxiliaries.

**Drumcondra.**—A Public Library will shortly be erected at Drumcondra, near Dublin, for the Glasnevin portion of the district.

**Dublin.**—The Board of Works has matured plans for a Central Bridewell quite close to the Police Courts. Here accommodation will be provided for 72 men and 48 women, and an underground passage will communicate with the Court. The amount voted for the completion of the work is £2,405.

Structural changes for an operating-room and a ward for the recovery of patients who have undergone serious operations will be made at the Coombe Lying-In Hospital. The sum of £5,000 will enable great improvements to be made in the institution.

The building of the New Empire Buffet is proceeding apace. The site is that recently occupied by the Harp Music Hall, better known as Pat Kinsella's. A great deal of iron joisting has been used, and the building will be a handsome structure when finished.

A sum of £28,000 will be required for the Bride's Alley Improvement Scheme, under the Housing of the Working Classes Act.

**Dundalk.**—Work is actively in progress on the clearance of the site for the new Post Office, and we are enabled to place before our readers some fuller particulars as to its design, &c., than have hitherto been published. The material, as far as the front is concerned, will be Ruabon brick, with dressings, string courses, window and door cases, &c., of carved freestone. It will be a two-storey building, but considerably higher than the three-storey erections at each side, so that not alone the public offices on the ground floor, but also the rooms of the upper storey, devoted to telegraph and telephone instrument rooms, &c., will be fine lofty apartments. The main feature of the design will be a wide and handsome bay-window, running all the way up, with recessed doorways at each side—one being the public entrance, and the other containing the receivers for posting letters. At the side will be a wide gateway, with ornamental wrought-iron grille above; and over the gateway is the linesman's and battery room. The entire frontage is of such a design and materials as to harmonise with other public buildings in Dundalk—the Exchange Buildings, for example. It is a finer building than most of the post offices recently erected throughout Ireland. The cost will be £4,000.

The public office, to which entrance will be had through a neat tiled porch and swing doors, will have a counter over 30 feet long, and in the recess of the window will be benches for writing telegrams, &c. Separated from the public office by swing doors will be the postmaster's private office, and adjoining that will be the lady clerk's room. The sorting room, behind the public office, will be a fine apartment about 50 feet by 25, lighted from the side and from the roof. Retiring rooms for clerks and postmen will be provided, and storage for bicycles, &c., in the yard. The upper floor of the main building will contain a large instrument room, linesman's and engineer's room, and a room for the telegraph boys. No portion of the building will be used as a postmaster's residence, the entire space being given to the working officials.

It is probable that a year from now will see the new office erected and in full work.

**Dundrum.**—A parochial ball for the parish of Kilmeagan will shortly be started.

**Ferns.**—The Church of Ireland is about to take in hand the restoration of the ancient Cathedral of St. Edan, Ferns, formerly the seat of the Kings of Leinster.

**Greystones.**—A movement is on foot for the establishment of a police barrack at Greystones.

**Helen's Bay.**—Mr. S. Dumican, of Helen's Bay, Co. Down, is completing a fine new dancing hall, and hopes to open it shortly.

**Inch.**—Tenders have just being invited for the renovation of the interior of Inch Church. Full particulars can be had from the Rectory, Inch, Co. Wexford.

**Inisheer.**—Efforts are being made to complete the Church of St. Kevin, at Inisheer, South Arran Island, by the clergyman, Rev. M. Farragher, P.P.

**Kilcoo.**—The foundation stone of the new Church of St. Malachy, Kilcoo, Co. Down, was laid on the 17th ult. The style of architecture is perpendicular Gothic. The

church comprises nave, 98 ft. by 35 ft.; sanctuary, 24 ft. by 18 ft.; sacristies and tower. The height of roof from floor line is 40 ft. to inner ridge and 51 ft. to outer ridge. The principal entrances are in the west front and tower—both through arched doorways, screened from the interior by framed enclosures. The nave is divided into six bays on each side, each bay having a two-light traceried window in its centre, the exterior face of wall being broken by weathered buttresses, which rise to nave. On each side of the chancel piers and within the sanctuary and enclosures are the spaces for side altars. The sanctuary is square on plan, and is lighted by three single light traceried windows. Over the projecting doorway of west front the wall is pierced with a two-light traceried widow flanked by two single-light windows, and the angle buttresses are carried over eave level and terminate in pinnacles. The barges of the gables are surmounted with cut-stone crosses of Celtic design. The tower is placed on the south side, and is 9 ft. square internally, and is carried to a height of 90 ft. The stairs in tower give access to a gallery in the west end, and also to the belfry. The roofs are waggon-shaped, having main or intermediate principals and carved braces, and the ceilings are formed with geometrical pattern panels, which are filled with Carolina pine sheeting. Pitch pine is the material used throughout the building. The floor space not occupied with the benches will be laid with Terrazzo marble pavement, whilst that of the sanctuary will be laid with wood-block flooring. The windows will be filled with lead lights of ornamental designs and of a separate pattern for each window. The walling is of rock-faced ashlar and dressings, all of Ballymagreehan granite, supplied by Mr. McEvoy. The architect is Mr. J. J. McDonnell, of Belfast, and the contractors are Messrs. W. J. Campbell and Sons.

**Kilmainhamwood.**—The new Catholic Church at Kilmainhamwood, Co. Meath, was lately dedicated by the Bishop of the diocese. It took three years to build, and replaces one which was put up in 1817, and which was falling into decay.

**Midleton.**—A second new scheme of cottages, involving an expenditure of £25,000, will shortly be proceeded with by the Council under the Labourers' Acts.

**Moynalvey.**—The foundation stone for the new Church at Moynalvey was laid on the 8th inst. Subscriptions are being received by the Rev. T. Gillie.

**Newcastle.**—The refreshment rooms at Newcastle Station, Co. Down, are about to undergo an overhaul and be brought up to date in point of furnishings.

**Newry.**—Tenders have lately been invited by the Urban District Council of Newry for the erection of twenty-one artisans' dwellings, from the plans of Mr. W. J. Watson, M.R.I.A.I., architect.

**Rathmines.**—Tenders were called three weeks ago for new premises for the Belfast Banking Company at Rathmines, Dublin. The architect is Mr. Vincent Craig, 5 Lombard Street, Belfast, and the quantities were prepared by Mr. S. C. Hunter, 2 Wellington Place, Belfast.

**Roscrea.**—The extensive disused workhouse at Donoghmo e, in the Roscrea Union, will shortly be converted into an industrial and technical training school for the pauper children of six or more surrounding unions.

**Rostrevor.**—The erection of a new central House of Rest in connection with the Girls' Friendly Society of Ireland has been successfully inaugurated at Rostrevor, Co. Down. The site is situated in about the best position on Carlingford Bay, and the building will provide accommodation for at least twenty-four inmates. The architect is Mr. W. J. Watson, M.R.I.A.I., and the cost will be £2,000.

**St. Kieran's.**—The foundation stone of a handsome church for the ancient parish of St. Kieran's, a few miles from Birr, was laid a short time ago, as the old edifice was in a most unsafe condition. The architect is Mr. W. H. Byrne, of Dublin. There are also other church-building schemes in the contiguous parishes of Nenagh, Cloughjordan, Ferbane, and Clonakenny—all in the Killaloe diocese.

**Waterford.**—The new hotel being built at Waterford by the Granville Hotels Company is from the designs of Mr. Thomas E. Hudman, architect, 49 Dawson Street, Dublin, and not from the plans of Mr. W. H. Lynn, R.H.A., Belfast, as stated in our issue of September 15th.

## ENGINEERING NEWS.

**Ballybay.**—The waterworks scheme is rapidly taking shape, as a committee of gentlemen in the town, accompanied by an engineer, have inspected the proposed source of supply, and the conditions seem very favourable to the enterprise.

**Belfast.**—The Public Health Committee have decided to recommend the Council to accept the tender of Messrs. Goddard, Massey, and Warner, at £9,776, for a refuse destructor. The heat generated by the destructor will doubtless be utilised for motor purposes in connection with the electric light station.

The Belfast Harbour Board have some great projects in contemplation. One is the widening of the entrance to Spencer Basin to 180 feet, for which contracts running from £27,000 to upwards of £40,000 have been tendered. Another is the Musgrave Channel, which is to afford space for the development of the shipbuilding trade, and on the west side there will be four jetties, each 300 feet in length, with the view to providing shipbuilders with fitting-out berths, and beyond that there will be space for the laying down of six additional shipbuilding yards. At an extra cost of £50,000 it is now proposed to move back the channel to give Messrs. Harland and Wolff the land they need. A third scheme is the development of the Clarendon Dock, for which some eighteen plans have been drawn out. For these works a consulting engineer will probably be called in. The borrowing powers of the Harbour Commissioners under the Acts 1882, 1893, and 1898, are £1,750,000, and a sum of £1,196,664 is still to be spent.

**Blackrock.**—Three public conveniences have been erected at a cost of £150, Mr. Price, C.E., being the Town Surveyor.

**Coleraine.**—Mr. J. H. H. Swiney, M.I.C.E., held a Local Government Board inquiry with reference to the new waterworks scheme. Mr. W. J. Given, Town Surveyor, and other officials, were in attendance. Among those who gave evidence at the Arbitration were Mr. L. L. Macassey, M.I.C.E., and Mr. R. J. Calwell, C.E., of Belfast; Mr. J. A. Hanna, C.E., of Coleraine, and Mr. Radcliffe, C.E. An adjournment was granted until the 25th October.

**Cork.**—Over a year ago a contract was made between the Corporation and the E. L. Co. for the lighting of the principal streets with 120 c.p. arc lamps, at a fixed price per lamp, on a basis of 2½d. per unit. Endless experiments and negotiations followed, as it was found that the lamp and power selected were unsuited alike to the temperament or temperature of the city. Ultimately a 200 c.p. arc lamp was agreed on between the city and company's engineers as giving the best results; the price to be charged was reduced to 1d. a unit—the E. L. Co. showing every disposition to deal liberally with the citizens—and the net result was that the city was offered over 70,000 additional candle power for the new lamps for £20 a year only in excess of the original amount fixed. Besides supplying a more powerful light in the principal thoroughfares, the company were willing, in the narrower streets, to light their poles and lamps with incandescent burners of less power, and altogether the arrangements were most advantageous to the community.

But in some unaccountable way to spite the E. L. Co. for not doing paving work on the trams which they never contemplated or contracted to do, the labour members aided by Messrs. Scully and Barrett actually throw out the cheaper scheme, and compel the E. L. Co. to charge the citizens 2½d. instead of 1d.!!

**Derryoughta.**—The longest stretch of railway without a station in the United Kingdom is said to be from Kildare to Athy, a distance of 15½ miles. It is proposed to erect a station about half way in the townland of Derryoughta, and the matter is in the hands of Mr. Ward, of the Great Southern and Western Railway Company.

**Donegal.**—Railway extension in Donegal.—The work of extending the Lough Swilly Railway to Carndonagh is now being pushed rapidly forward, and aided as the contractors have been by the favourable weather of the past summer, the progress made justifies the expectation that the line will be completed well within the time, and that before the lapse of another year the extension will be open for traffic. It is calculated that the work will involve an expenditure of close on £100,000, only £5,000 of which, however, is guaranteed by one of the baronies through which the line will run. The Lough Swilly Railway Company, who will have the working of these extensions, have generously undertaken to fully equip it, and with this object they have either obtained or have on order the additional rolling stock necessary, including two large narrow-gauge engines, constructed from original designs by Mr. Millar, the company's locomotive superintendent. The entire length of the new line will be about eighteen miles and a half. On the 23rd May last Lady Betty Balfour, wife of the Chief Secretary, cut the first sod of the new line at Carndonagh. At present there are about 750 men engaged at different points, and the progress made has been rather remarkable. There will be six new stations on the line—Ballymagan, Drumfries, Clonmany, Ballyliffin, Rashenny, and Carndonagh. The railway will be narrow gauge throughout so as to connect with the existing line, and the highest gradient will be reached about seven miles from Buncrana. Tunnelling will not be resorted to, but there will be several bridges and viaducts, and in some places the line must run under the roads so as to maintain a proper gradient. Leaving the present terminus at Buncrana—a beautifully-situated watering place, increasing in popularity each succeeding season—the line crosses the public road by a level crossing, and pursues an easterly direction till it crosses over the mill river at the mill-house by means of a large masonry viaduct. Thence at the west side of Buncrana village it runs almost parallel with the public road to the village of Ballymagan, the first station after leaving Buncrana. Crossing the public road at this point by a bridge underneath the roadway, it proceeds till it meets the Cranagh River, which is spanned by a girder bridge 75 feet in width. The line next enters the Kinneoge district, and follows the course of the Owenboy River as far as Drumfries National School. Here it again crosses the short road to Carndonagh, and proceeds in the direction of Clonmany and Ballyliffin. It then passes on the east side of the Meentiaghs Loughs. Hence the line passes through the pretty Meendoran valley, locally known as "The Gap," where those who can appreciate the really picturesque cannot fail to be charmed with the scene. Crossing the Cloontagh River into Gortern, it passes under a bridge into the thriving village of Clonmany. At this point it skirts round the base of the hill at the rear of the Roman Catholic Chapel, near which is the site of Clonmany station. About a mile beyond this the line again passes over the public road, running parallel with it till it reaches Ballyliffin village. On leaving Ballyliffin it next proceeds through Moorland, which possesses a rugged beauty of its own, till Rashenny is reached. Here it deviates to the north side of the public road by Strath, and crosses the Strath River by an iron bridge of two spans. From this it cuts through Collin Hill, passes Donaghglebe House and Tiernaleague Mansion, crosses Donagh River by means of an arched bridge of two spans, and terminates in Carndonagh (a prosperous fair and market town, with excellent hotel accommodation) at the public road near the National School. Owing to the number of men placed on the

undertaking a good many of the foundations of the larger bridges have been securely laid—advantage being taken of the low water during the summer months—and the erection of the superstructure is now progressing satisfactorily. A large squad of men is at present engaged excavating the cutting at Clonmany Station, and another squad is employed at a cutting that is being effected through the Collin Hill. Altogether the work, when completed, will open up one of the best districts in the county.

**Dublin.**—Mr. C. P. Cowan, M.I.C.E., Local Government Board Inspector, held an inquiry into an application of the Corporation for a loan of £28,000 for an improvement scheme, and others of £750 to erect an underground convenience at Sherrard street, and £1,270 for a like work at Parkgate street. The City Engineer is Mr. Spencer Harty, M.I.C.E.

**Kilmore.**—The breakwater built at Kilmore about ten or twelve years ago is now in a rotten condition, and the Wexford County Council have appointed a deputation to wait on the Treasury for a grant to renew the pier.

**Limerick.**—There is every likelihood that the Limerick electric tramway scheme will be adopted by the Borough Council. The promoters propose to expend £67,000 on the project, and the matter has been under investigation by a committee of the Council for the past few months. The Committee agreed to recommend the Council to pass the tramway scheme, including haulage powers from the dock to the railway.

**Waterford.**—A committee of citizens of Waterford has been formed to investigate the proposal of the Corporation to undertake a new main-drainage scheme, the cost of which is estimated at £40,000. At a meeting of the burgesses it was stated that the proposed work would entail a rate of 1s. 6d. in the pound.

## ENNISKILLEN TOWN HALL.

Early in 1897, during the Chairmanship of Mr. H. R. Lindsay, J.P., it was finally decided to build a new Town Hall. Having determined to erect a new building, the Town Commissioners adopted the best means of uniting artistic effect with plain matter-of-fact usefulness. They advertised for competitive plans, offering a prize of £50 for the best design, with the result that no fewer than nineteen architects competed. They selected Mr. Thomas Drew, R.H.A., as assessor, and after a careful examination of the plans, he awarded the first prize to the design bearing the *nom de plume* of "Black and White," which, when the sealed envelope accompanying them was opened, proved to be the work of Messrs. Anthony Scott and Son, Architects, Drogheda and Navan. The assessor, Mr. Drew, made the following remarks about this design: "I have placed "Black and White" first, and wish to distinguish it apart from all others as a design of pre-eminent merit. It is planned in a skilful and masterly way such as no other design approaches, and with some modifications in detail would be a nearly perfect plan for the purpose." The second prize (£20) was awarded to Mr. W. Kaye Parry, 35 Dame Street, Dublin; and the third prize (£10) to Mr. T. Roe, Lombard Street, Belfast.

The contract was given to Mr. James Harvey, of Belmore Street, Enniskillen, and Messrs. Scott were appointed to superintend the execution of their design. The foundation stone was laid in May, 1898, by the Countess of Enniskillen, who very graciously accepted the invitation of the Commissioners to perform the interesting function. Mr. J. Jordan, M.P., speaking at the last meeting of the old Board, said "that under the Chairmanship of Mr. H. R. Lindsay they had initiated the building of a Town Hall—a great hall that

would be a credit to them. It was almost too good for a town like Enniskillen; at any rate it was before its time, and the conception of, and carrying out of, the building of such a hall, under the Chairmanship of Mr. Lindsay and the present Chairman (Mr. W. R. Cooney), was a credit to the town, and when the building was finished he thought they would have great cause to look back upon the part they had taken in the erection of such a house." The building is in the style of the Renaissance, of the type peculiarly adapted and universally recognised as most suited to buildings of this kind.

The new building is placed on a corner site, where the old Town Hall or Markethouse formerly stood. The façade to Town Hall Street is marked by a central portico with detached columns and respond pilasters supporting a balcony over, and a projection carried up to the main balustrade, where it terminates in a pediment which is to have a carved tympanum and pedestals for a group of statuary to represent some of the arts of peace. This façade is flanked by a Clock Tower, which is the commanding feature of the whole design. The Clock Chamber is under the Lantern of Tower and has four faces. The Clock will be seen from almost all parts of the town. The Lantern itself is ornamented with attached coupled pilasters, over which are four angle turrets with domed coverings. The upper part of Lantern changes from square to circular, and is crowned by a domed roof covered with copper. The Assembly Hall and Offices are ranged along the side street. The Assembly Hall stands boldly up, forming a marked feature in the grouping. It is roofed separately, and has a central ventilating turret. There is a separate entrance to the building in this façade, which is treated somewhat like the front entrance, having similar columns with a balcony over, which is reached from the Assembly Hall through a French window, and would be used for public speeches or announcing the result of elections.

The general façade and most of the tower is faced with Carrickreagh dark limestone finely punched. The columns, capitals, cornices, and general dressings, are of Dungannon sandstone. This stone is of rich cream colour and forms a fine contrast with the dark limestone. The lower storey of the building is rusticated. The ground falls rapidly in Water Street and this was taken advantage of to provide caretaker's apartments with separate entrance. The basement also contains Fire Brigade room, Town Hall kitchen, pantries, stores, and heating chamber, with yard at back. The ground, or principal floor, contains reading room, clerk's office, chairman's parlour, Council Chamber, and Minor Hall.

A full description of the building may be published later on with the geometrical elevations.

**The Smyth Memorial.**—An exquisitely beautiful example of the sculptor's art has just been executed by Messrs. P. J. Neill and Co., of 182 Great Brunswick-street. It is a memorial to the late Edward Skeffington Randal Smyth, Esq., J.P., V.L., and takes the form of a carved tablet of pure Carrara statuary marble on a base or ground of polished black marble. The tympanum of the work is supported by two beautiful coloured marble columns, the capital being richly carved. In the tympanum, which is surmounted by a carved panelling in high relief, is placed the family arms and motto, *Cornu exaltabitur honore*, of the deceased gentleman, also carved in high relief. The inscription sets forth that the tablet has been "erected by his tradespeople and his Queen's County, King's County, and County Longford tenantry as their last token of respect." The work reflects the highest credit on the sculptors.

**A Special Meeting** of a Committee of the Cork County Council was held recently, at which a resolution was passed recommending the Council to employ direct labour on all the roads of the County, when feasible and necessary for the unemployed of each district, raising material, carting, and breaking to be by contract in all cases where practicable. The sum of 2s. per day in the winter months was suggested as a fair wage.

## BOOKS RECEIVED.

**The New War Office.**—We have received a red-covered pamphlet, entitled, *The New War Office: What is to be; What still might be*, by the Earl of Wemyss. It is a memorial, signed by no less than 140 Peers, asking that models of the Government plans and designs for the New War Office should be made and publicly exhibited along with a model of a suggested adaptation to the New War Office of parts of Inigo Jones' design for the Palace of Whitehall, of which the Banqueting Hall alone was built. In the pamphlet are published the Government design and ground plan of the site now utilized; the suggested adaptation to the War Office of parts of Inigo Jones' design for Whitehall Palace, with the ground plan of the proposed frontage and site; the Memorial to the Government asking that models of the two designs should be laid before the public with the names of the 140 signatories; also various correspondence on the subject.

As long as the memorialists adhere to their contention that models of new Government buildings should be publicly exhibited, we are in entire agreement with them, for the principle of models should be accepted for all important buildings, but when they proceed to set forth the "Inigo Jones possibilities" of the site we join issue with them at once. We happen to know this particular spot in London very well, and we have no hesitation in saying that, whatever the merits of the suggested Whitehall Palace adaptation design may be, it is certainly not suited for a Government Office. In the suggested Palace design there are only *two* storeys in the main building and three in the wings, whereas in the officially accepted design by Mr. William Young, F.R.I.B.A., there are no less than *four* storeys in the main block. It is obvious, therefore, that the latter design must give much greater office accommodation than the former, and be more suited to its purpose. It is, in fact, practical, and eminently satisfactory from an artistic point of view as well, as can be seen by a glance at the elevation. We certainly cannot admire the Palace adaptation front which the Earl of Wemyss' architectural "ghost" has produced for him. It is not in conformity with one's ideas of what even a new War Office should be, and the range of statues along the top seems quite out of place. The fact that among the signatories are the Archbishop of York, several Bishops, six Dukes, and two Field-Marsbals, and many other titled folk, does not carry the slightest weight to our minds, for we have had many amateur architects among the nobility, from the Earl of Burlington down to Lord Grimthorpe of the present day. The signatures of a few good architects would have been much more to the point. We are afraid that the publication of the pamphlet (except as regards the contention about the models) is wasted, for Lord Salisbury has refused to interfere with the course of the work.

**Natural and Artificial Methods of Ventilation.**—Messrs. Robert Boyle and Son, Limited, 64 Holborn Viaduct, London, have kindly sent us a most valuable little book on the above subject, which we advise all architects and engineers to get for themselves, and inwardly digest. As Parkes has said: "Ventilation is a science, and it requires the study of a lifetime to master properly all its intricacies," and the greatest skill is necessary to arrange a proper supply of fresh air. No man has more thoroughly studied the subject than Mr. Robert Boyle, and his Sanitary Crusades throughout the world are celebrated. The results of a lifelong study are embodied in this book, and judging by the constant specifying of Boyle's Air-Pump Ventilators by the profession there is not the slightest doubt that they are a lasting success, and show that the natural system of ventilation is the best. One sees these ventilators everywhere, and we have again and again tested their utility, and have always been satisfied. A natural system of extraction at a low velocity, of say 2 feet per second, prevents any feeling of draught, and it is an immense advantage to have no costly mechanical contrivances which are liable to break down at any moment. Indeed we have seen places where the Propulsion system had to be taken out, and a natural and more simple method substituted. There are some excellent coloured illustrations towards the end, and the information is scientific and to the mark.

**Mr. James Tute**, of Dnndalk, has been elected to the position of engineer by the Clones Rural District Council, No. 1, for the proposed labourers' cottages, at £4 10s. per house.

**The Fountain in Leinster Lawn** in memory of the late Surgeon O'Grady is approaching completion. It will be a pretty structure. The work is in the hands of Harrison, of Brunswick-street. This custom of erecting fountains to the memory of notable citizens is a good one, and deserves encouragement. Fountains are both ornamental and useful, and there is plenty of room in Dublin for them.



## A.A.I. JOTTINGS.

The Classes of Construction and Design recommence their meetings at 22 Clare Street on the dates mentioned below. It is sincerely to be hoped that the younger members of the Association will take full advantage of the instruction thus offered them. The large amount of time and trouble necessarily given by the visitors and lecturers in the preparation of their papers, etc., can only be repaid by a constant attendance of the members. Substantial prizes are offered in connection with each of the classes.

The Class of Design will meet on Thursday, November 2nd, at 8 p.m. The Hon. Sec. of the Class is Mr. E. Bradbury, 19 Cambridge Road, Rathmines.

The Class of Building Construction will meet on Thursday, November 9th, at 8 p.m. All communications with regard to this Class should be addressed to Mr. J. P. McGrath, 19 South Circular Road.

It is interesting to note that the excellent drawings of the Dining Hall, Trinity College, published in the last issue of the "Irish Builder," were selected from the measured drawings with which Mr. Delany won the A. A. I. Travelling Studentship in 1897.

The new edition of the "Green Book," just issued to the members, contains many new features. On page 7 a Syllabus of all the meetings for the session will be found. Every paper is upon a most interesting subject, and should command a numerous attendance. On page 8 is given a list of prizes for competition, and it is hoped that another very valuable prize will shortly be added.

The classified index of advertisers should be of great use to senior members of the profession, who will be able to find the names and addresses of various manufacturers without hunting through the enormous number of circulars and pamphlets which accumulate in every office.

The Presidential Address, which for the first time is incorporated in the "Green Book," should be read by all those interested in the subject of registration for architects.

At the Inaugural Meeting of the London A. A. this all-important matter will again come up for discussion.

Important dates for A. A. I. members—

Tuesday, October 17th.—Annual General Meeting and Presidential Address by Mr. Geo. Sheridan, A.R.I.B.A., Grosvenor Hotel. 8 p.m.

Saturday, October 21st.—Visit to Richmond Surgical Hospital, North Brunswick Street. 2.45 p.m. Architects—Messrs. Carroll and Batchelor.

Tuesday, October 24th.—Annual Smoking Concert for members and friends. Grosvenor Hotel. 8 p.m.

"OCULUS."

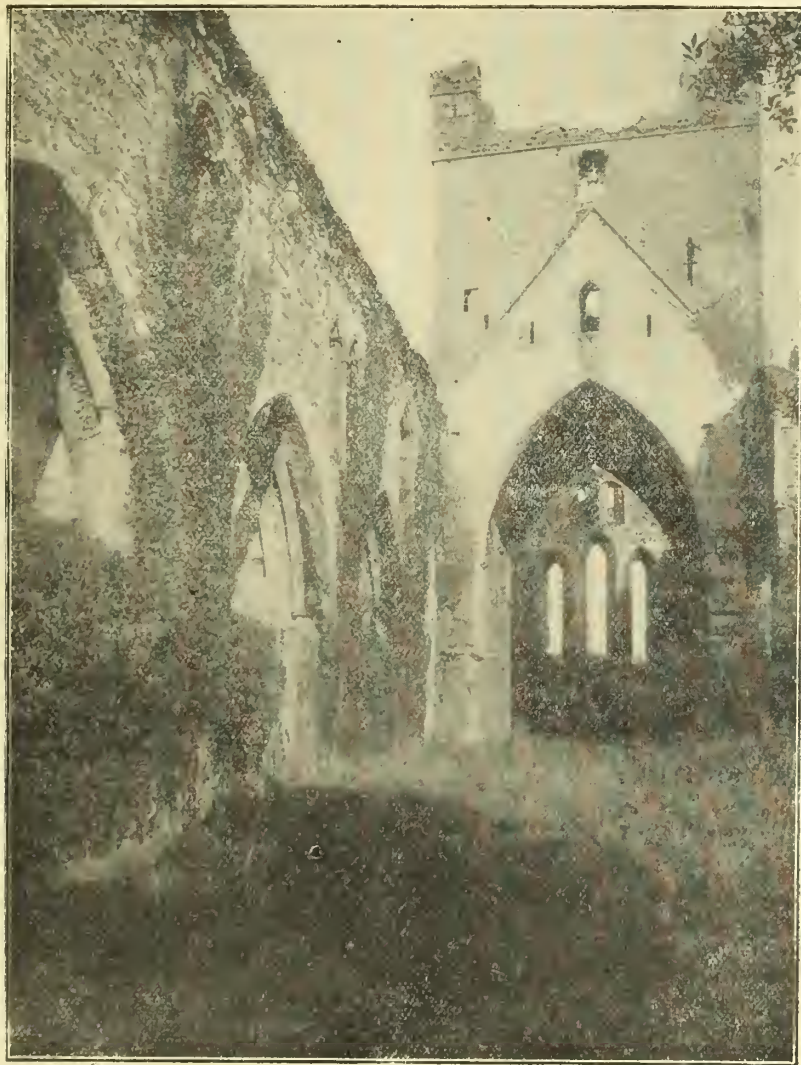
## DUNBRODY ABBEY.

Near New Ross is the most interesting ruin in South Wexford—the far-famed Abbey of Dunbrody. In 1187 Harvey de Monte Morisco—a relative of Strongbow—granted the lands of Dunbrody to the monks of Bildewas, in Shropshire; they, however, made no use of the gift, and eventually transferred it to the monks of St. Mary, Dublin, who built the Abbey in 1199. Harvey himself became a monk, but an old chronicler says, “In laying aside his knightly armour for the monkish cowl, he did not divest himself of the rude and licentious behaviour which had always characterised him.” The last Abbot of Dunbrody was the first Protestant Bishop of Ferns, and his tombstone is to be seen in Fethard Churchyard. The accompanying engraving

## OUR LONDON LETTER.

**The New War Office.**—The Earl of Wemyss, who is responsible for a memorial lately presented to the Government on the above question, has just issued a pamphlet containing a copy of the memorial and the whole facts of the proved design and also of the suggested one, his object in case accompanied by block plans and elevations of the apso doing being that in view of all chance of the Whitehall site being rightly used by the Government having gone, posterity should be in a position to judge how far the present Government have been true to their trust.

What the signatories asked was, that models from the Government plans and designs for the new War Office should be made and publicly exhibited along with a model



DUNBRODY ABBEY.

(From a Photo by Mr. G. D. Croker, Bookseller and Photographer, The Mall, Waterford.)

Block kindly lent by the "Missionary Herald"

is from a photo kindly lent by Mr. C. D. Croker, bookseller and photographer, Waterford. The photo shows the great central tower, and in the distance is the noble east window, while to the left is the only remaining wall of the nave.

**The Foundation Stone** of Parnell's monument was laid on Sunday, the 8th inst., in Sackville-street, Dublin, opposite the Rotunda. It will probably be some time before the monument itself is erected.

**The Sanitary Institute** have arranged to hold an examination for Inspectors of Nuisances at Belfast on January the 26th and 27th, 1900. Particulars can be obtained at the offices of the Institute, Margaret-street, London, W.

**The Limerick Harbour Commissioners** have allowed their engineer, Mr. W. P. Elliott, three months' leave of absence to enable him to accept the invitation of a firm of contractors to go out to Hong Kong on their behalf, and assist in a survey on dredging operations there.

of a suggested adaptation to the new War Office of parts of Inigo Jones' design for the Palace of Whitehall, of which the Banqueting Hall alone was built.

The memorial was signed by 140 peers of the realm, but was set aside by Lord Salisbury on the ground that plans having already been approved and contracts entered into he did not feel justified in interfering with the course of the work.

Shortly afterwards the Earl of Wemyss moved a resolution in the House of Lords to the effect that it was desirable that models of all public buildings of importance which are about to be erected at the public cost, should be made and publicly exhibited, and in the debate which followed intimated his intention of dividing the House on the question, but subsequently withdrew the motion understanding the Duke of Norfolk to say he had hopes of the Government accepting the principle of models and which he (Earl

Wemyss) thought would apply to the War Office, whereas it was only suggested prospectively; had he understood this he would have pressed the motion to a division.

In a final observation it is pointed out that it is not yet too late to alter the matter on the precedent set by the Millais' Memorial Sub-Committee, who in February visited the Tate Gallery and generally approved of the site for the Statue, a temporary model being in the meantime erected on the spot, this model being inspected the following month and the site finally settled, and all that is asked of the present Government is that in connection with the new War Office, a much more important matter, they should act in a similar manner.

#### The Sanitary Institute and Practical Hygiene.—

Among the many subjects taught in the various schools, attention has been paid, particularly of late years, to the question of hygiene, and the desirability of having properly trained teachers in this important branch is quite appreciated by those responsible for the formation of the staff, but so far no suitable examination has been instituted by means of which teachers could qualify themselves for these positions, but now the Council of the Sanitary Institute have decided to add to their syllabus a thorough theoretical and practical examination in hygiene, the first of which will be held in London next February to be followed in due course by others in the provinces.

**The Widening of the Strand.**—One of the most familiar spots in the Metropolis is about to make way for the improvement necessitated by the scheme of the L. C. C. for the new thoroughfare from the Strand to Holborn which includes the demolition of Holywell Street, the narrow little roadway, with its quaint tall houses on either side, which has so far survived the clearance of 1860 made when the Law Courts, upon which one end of it opens, were built. The street has not much to recommend it beyond its value as a remnant of Old London; the name will of course suggest the Holy Well of St. Clement, the church being immediately adjacent, though the well has long since been lost sight of; the shops here kept their old signs sometime after they had elsewhere been generally removed, indeed one, the Half-Moon, exists to this day.

Formerly in the occupation of silk mercers the shops afterwards became tenanted by dealers in more or less doubtful wares, particularly in the way of literature, and it is not a particularly savoury neighbourhood to this day.

**The Art Exhibition,** now being held at the Imperial Institute in connection with the Church Congress, promises to be the most successful and attractive ever held since its institution some twenty-one years ago. The whole of the North Gallery will be devoted to exhibits, while there will be a Loan Collection in the annexe of some magnificent church plates forming such an opportunity of seeing many rare and beautiful specimens as it is not at all likely to occur again for many years, while a unique show of Beadles' Staves will be another attraction; in addition to this, another Exhibition is held at Leighton House, the residence of the late President of the Royal Academy and now the property of the nation, which, with its magnificent Arab Hall, is alone well worth a visit.

### BREVITIES.

**The Killarney Urban Council** are about to appoint a Town Surveyor.

**Mr. John M'Guire** has been appointed architect to carry out the labourers' cottages scheme of the Castlereagh District Council.

**Parnell's Home** is about to be sold on the 3rd November next, before Judge Ross, in the Dublin Four Courts. The entire estate, including Avondale House and demesne, will be offered for sale.

The Irish Builder offers to District Councils, and all Administrative Boards just that direct technical medium for advertising which they seek.

## CORRESPONDENCE.

### Technical Classes.

*To the Editor of the Irish Builder.*

SIR—In your last issue a correspondent ("D. A. M.") desired information as to technical instruction for junior members of the Architectural Profession. It may interest him to know that classes for Design and Construction, open free to all members of the Irish Architectural Association, are held on alternate Thursdays, commencing from November 2nd, at 22 Clare Street. In these classes the instruction given is specially intended for the younger members of the profession, and for those who may have the ultimate intention of entering for the R.I.B.A. or other examinations

We are, yours faithfully,

H. ALLBERRY }  
F. G. HICKS } Hon. Secs., A.A.I.

22 Clare Street, Dublin, Oct. 9th, 1899.

## ANNALS OF MONKSTOWN

AND

SOME NEIGHBOURING PARISHES IN THE  
COUNTY OF DUBLIN.

BY FRANCIS ELDRINGTON BALL, M.R.I.A., F.R.S.A.I.

### CHAPTER V.—Continued.

1500—1600.

1542—In an inquisition made in this year the Abbot of St. Mary's was found to have been seized of a castle, 2 houses, 6 cottages, 70A. of arable, 8A. of meadow, and 40A. of pasture land, with 8A. of underwood and a sea creek, at Bullock of the annual value of £3 12s 3d—*Archdall's Monasticon Hibernicum*, edited by Moran, vol. i., p. 321.

1545—In an inquisition of this year the Abbot of St. Mary's was found to have been seized of the Manor of Monkstown, and of a castle, 16 houses, 207A. of arable, 9A. of meadow, and 100A. of pasture land, with 9A. of wood in the manor of the annual value of £10 9s 10d; also of a capital messuage, surrounded with stone walls, and three towers, three cottages, an orchard, and a close containing 5A. of pasture, 160A. of arable, 16A. of pasture, and 2A. of meadow land, with 1A. of moor, in the Grange of Monkstown of the annual value of £8; and of a castle, 2 houses, 8 cottages, 8A. of arable, 2A. of meadow, and 30A. of pasture land, with a moor in Newtown of the annual value of £4 14s—*Ibid.* p. 322.

1545—Patrick Bellew was Vicar of Kill of the Grange—*Report Irish Record Commissioners*, vol. ii., p. 566.

1545—The Grange and capital messuage of Monkstown, which was occupied by William Kelly, the bailiff of the Abbey, Newtown, which was occupied by John Moran, and Cornel's Court were granted by the Crown to John Travers—*Fiant's Henry VIII.*, No. 460.

1547—George Browne, Archbishop of Dublin, returned to the Dean and Chapter of Holy Trinity the sum of 40s. payable to the See by the churches of Kill of the Grange, Stillorgan, Killiney and Tully—*Christ Church Deed*, No. 440.

1547—Sir Anthony St. Leger obtained permission to alienate to Edward Staple, Bishop of Meath, and others, the church of Kilmacud—*Fiant's Edward VI.*, No. 162.

1547—James Goodman, of Loughlinstown, was granted lands belonging to Castlekevin, and to admit of his residence there was freed from attendance on juries and service as Sheriff. Two years later a pardon was granted to him, to his wife, Margaret Hyde, and to James Goodman, of Rochestown—*Ibid.* Nos. 9, 266.

1548—Sir Edward Bellingham landed on May 18 at Dalkey on his arrival as Lord Deputy—*Liber Munerum*.

1549—William Walsh, of Carrickmines and of Oldcourt, gent., was granted a pardon. In the preceding year he had been leased the prebend of Rathmichael, and in the following year his son Richard received a pardon for intrusion on the lands of Kilterman—*Fiants* Edward VI., Nos. 214, 265, 542.

1550—Sir John Travers, of Monkstown, was granted permission to alienate his lands to trustees, and also was granted a pardon—*Ibid.* Nos. 497, 541. In this year his chaplain and kinsman, Robert Travers, was given the Bishopric of Leighlin. He was deprived in 1555 by Queen Mary on the ground of his being a married man—See *Calendar of State Papers, Ireland*, 1509-73, p. 108, and Cotton's *Fasti Ecclesiæ Hibernicæ*.

1551—The Lord Deputy, Sir James Croft, on July 14, dated a letter from Monkstown—*Calendar of State Papers, Ireland*.

1551—George, Archbishop of Dublin, united the churches of St. Brigid of Stillorgan and Kilmacud to that of St. Fintan of Kill of the Grange, the union, if any existed, between Kilmacud and St. Mary's, Donnybrook, having been revoked—*Christ Church Deed*, No. 444.

1551—Sir Anthony St. Leger sold the rectory and parish church of Kilmacud to James Bathe, afterwards Chief Baron of the Exchequer, for £80, and assigned it to Bathe's trustees—Richard Talbot, of Dublin; John Caddell, of Naul, and Michael Goulding, of Artane.—*Ibid.* No. 1232.

1552—Dalkey, Monkstown, and the rectory of Bullock are mentioned in a lease granted to Walter Peppard, one of the Gentlemen Ushers of the King's Chambers, of such possessions of St. Mary's Abbey as had not been granted by Henry VIII.—*Fiants* Edward VI., No. 1083.

1552—In a suit between Thomas Lockwood, Dean of Holy Trinity and Rector of Kill of the Grange, and James Goodman, of Loughlinstown, and James Goodman, of Cornel's Court, gentlemen, it was decided by the official of the Metropolitan Court that the election of minister or parish clerk of Kill of the Grange belonged to the Dean—*Christ Church Deed*, No. 445.

1552—Patrick McDonagh, alias Balloo, late of Stillorgan, husbandman, was pardoned for the robbery of "unum jugum anglice a fott roppe," value 2s, belonging to William Wyddir of Simonscourt, husbandman—*Fiants* Edward VI., No. 1,026.

1553—Sir Anthony St. Leger landed on November 11 at Dalkey on his arrival as Lord Deputy for the fifth time—*Liber Munerum*.

1554—The trustees of James Bathe were granted permission by the Crown to convey the rectory of Kilmacud to the Dean and Chapter of Christ Church, notwithstanding the Statute of Mortmain—*Christ Church Deed*, No. 440.

1554—Sir Anthony St. Leger sailed from Dalkey—Gas-kin's *Irish Varieties*, p. 129.

1555—The Dean and Chapter of Holy Trinity leased to William, son of Tybot Walsh of Carrickmines, the lands of Brennanstown, Priorsland, and Keatingsland. Walsh undertook to mow the meadow and to gather the tithes of Brennanstown to the usual place, known as the "holy stood"—*Christ Church Deed*, No. 1,242.

1556—A pardon was granted by the Crown to William Walsh, gent., of Carrickmines, James Archbold, gent., Katherine, his wife, and Simon and William, his sons, all of Loughlinstown, provided that it did not extend to any of those who were consenting to the murder of Peter Talbot—*Fiants* Philip and Mary, Nos. 104, 275.

1557—A pardon was granted by the Crown to Sir John Travers, of Monkstown, and to George Wolverston and William Wolverston, of Stillorgan—*Ibid.* no. 187. The Wolverstons were no doubt serving under Sir John Travers. They were probably cadets of the ancient Suffolk family of

that name, now seated in Staffordshire—See Burke's *Landed Gentry* under "Wolverston of Statfold."

1558—The Earl of Sussex, then Lord Deputy of Ireland, with a large detachment of his forces embarked on September 13th, at Dalkey, to oppose the Scottish invaders at the island of Rathlin—Harris's *History of Dublin*, p. 311.

1559—John Parker, then Irish Master of the Rolls, was granted permission to buy in Ireland 500 stone of wool and to export it from amongst other places, Dalkey and Bullock as he had started the manufacture of tapestry and of hats, and had to import from England and Flanders coloured wools and other things for "those mysteries" for which he was unable to pay in money owing to the great loss in the exchange—*Fiants* Elizabeth, No. 92.

1559—The Earl of Sussex landed at Bullock on Sunday, August 27th, on his arrival for the third time as Lord Deputy—*Liber Munerum*.

1560—The Earl of Sussex went to sea from Monkstown on Tuesday, February 13th, and "so passed into England"—*Ibid.*

1560—A commission was issued to Sir John Travers, and William Walsh, of Carrickmines, amongst others, to take the muster and array of the county Dublin, and to call before them all the subjects, and assess them in warlike furniture of weapons, arms, horses, horsemen, and footmen, according to the manner and quantity of their lands and chattels, as the instruction of the Lord Lieutenant and the customs and laws of the realm required—*Fiants* Elizabeth, No. 260.

1561—The Dean and Chapter of Holy Trinity, leased the lands and tithes of Kill of the Grange, Tipperstown, and Ballyogan, to Christopher Bassenet, John Brady, and Sir John Hore, chaplain, who were to find a curate for Kill of the Grange—*Christ Church Deed*, No. 1271.

1561—Sir John Travers was appointed one of the Commissioners to keep the peace within the Pale during the absence of the Lord Lieutenant in the North—*Fiants* Elizabeth, No. 1561.

1561—Richard Luttrell, as a trustee for Sir John Travers, held amongst other property Cornel's Court—*MS. Inquisition* in Irish Public Record Office.

1562—Sir John Travers died on May 25th—*Calendar of State Papers, Ireland*—1509-73, p. 195. Sir John left a widow, "Dame Cecily Travers," but no children survived him. He left his property to the two daughters of "the late Henry Travers" who was probably his son. Henry Travers had married Genet Preston, daughter of Jenico, 3rd Viscount Gormanston. She married secondly Robert Pipho, a kinsman of the great Walsingham, and Sir John gave them in 1556 the lands of Holywood, and in 1661 apartments which he had in St. Mary's Abbey in Dublin. Henry Travers' elder daughter, Mary, married James Eustace, 3rd Viscount Baltinglass, and the younger, Katherine, married John Cheevers, of Macetown, in the county Meath—*MS. Inquisition in Public Record Office*.

1562—James Barnewall, then Attorney-General for Ireland, was leased by the Crown the tithe corn of Monks-town for 21 years at a rent of £10—*Fiants* Elizabeth, No. 465.

1563—Robert Talbot, of Belgard, assigned to Matthew Byrressell, gent., and Thomas Lawless, yeoman, the castle and lordship of "Yenah called Dalkey"—Molyneux's *Collectanea de Rebus Hibernicis*.

(To be continued.)

Messrs. B. Haughton & Co. (the Cork Timber and Iron Company, Ltd.), Work have opened new ware-rooms at North Main Street, in that City.

Nine columns in the great hall of the famous Temple at Karnak, on the site of ancient Thebes, have fallen down.

## MARKET PRICES.

## OILS AND PAINTS.

		£	s.	d.	£	s.	d.
Copperas .. ..	per ton	2	0	0	—	—	—
Lard Oil .. ..	per cwt.	1	9	0	—	—	—
Linseed Oil .. ..	"	1	2	2	—	—	—
Petroleum, American ..	per gal.	0	0	7	—	—	—
Do. Russian .. ..	"	0	0	5	5/8	—	—
Pitch .. ..	per barrel	0	8	0	0	8	6
Tallow, Town .. ..	per cwt.	1	4	0	1	5	0
Tar, Stockholm .. ..	per barrel	1	5	6	1	6	0
Turpentine .. ..	"	1	17	9	—	—	—
Glue .. ..	per cwt.	1	14	0	2	18	0
Lead, white, ground, carbonate ..	"	0	19	0	—	—	—
Do. red .. ..	"	0	18	1½	—	—	—
Soda crystals .. ..	per ton	3	10	0	—	—	—
Shellac, orange .. ..	per cwt.	3	2	0	—	—	—
Pumice stone .. ..	"	0	8	9	—	—	—

## METALS.

Copper, sheet, strong ..	per ton	88	0	0	—	—	—
Iron, bar, Staffs. in London ..	"	8	10	0	9	0	0
Do. Galvanised Corrugated sheet .. ..	"	13	10	0	14	0	0
Lead, pig, Spanish .. ..	"	15	2	6	16	10	0
Do. do. English common brands ..	"	16	3	9	—	—	—
Do. sheet, English, 6lb per sq ft. and upwards ..	"	16	10	0	16	12	6

Lead pipe .. ..	"	17	5	0	—	—	—
Nails, cut clasp, 3 in. to 6 in. ..	"	10	0	0	11	0	0
Do. floor brads .. ..	"	9	15	0	10	15	0
Tin, Foreign .. ..	"	149	15	0	150	5	0
Do. English ingots .. ..	"	153	0	0	154	0	0
Zinc, sheets, English .. ..	"	27	10	0	28	10	0
Do. do. Veille Montaigne ..	"	29	10	0	—	—	—
Do Spelter .. ..	"	22	0	0	22	5	0

## TIMBER.

## SOFT WOODS.

Fir, Dantzic and Memel ..	per load	3	0	0	4	0	0
Pine, Quebec Yellow .. ..	"	4	7	6	6	5	0
Do. Pitch .. ..	"	3	12	0	3	15	0
Laths, log, Dantzic .. ..	per fath.	4	10	0	5	10	0
Do. Petersburg .. ..	"	4	0	0	6	10	0
Deals, Archangel 2nd and 1st ..	per P. Std	15	10	0	20	5	0
Do. do. 4th & 3rd .. ..	"	12	10	0	12	15	0
Do. do. unsorted .. ..	"	12	5	0	12	10	0

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60 Upper Sackville Street, Dublin.

## APPOINTMENTS OPEN.

Appointment	To whom	Salary	Last date
Sanitary Sub-Officer ... ..	Bray Urban District Council ... ..	£52 per annum ... ..	October 16th
Electrical Engineer ... ..	Corporation of Newcastle ... ..	£500 per annum ... ..	" 17th
Assistant Civil Engineer, in H.M. Naval Establishments ... ..	Civil Service Commission, London, S.W. ...	£180 to £1,000 per annum ...	" 19th

## COMPETITIONS OPEN.

Design	Advertised by	Premium	Last date
School for 1,000 children, Blackpool ...	Clerk to School Board, Town Hall, Blackpool ... ..	— — —	October 17th
Baths at Elland ... ..	Elland Urban District Council ... ..	£20, and £10 ... ..	" 28th
Infectious Diseases Hospital, Bury ...	Corporation of Bury ... ..	£100, £50, and £25 ... ..	December 1st

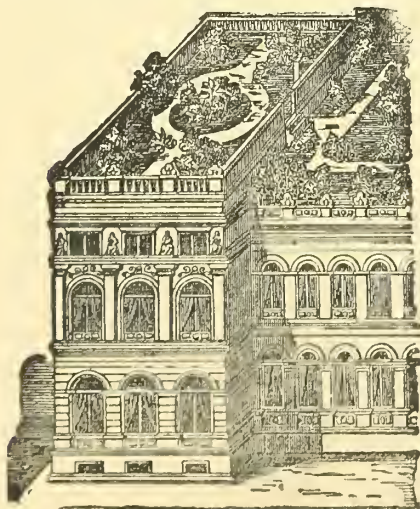
## CONTRACTS OPEN.

Work	For whom	Apply to	Last date
Twenty-one Artisans' Dwellings in Newry	Newry Urban District Council ... ..	Mr. W. J. Watson, M.R.I.A.I., Architect, Town Hall, Newry	October 16th
Disinfecting Chamber at Fever Hospital, Thurles ... ..	Thurles Union ... ..	Clerk of Union, Thurles ... ..	" 17th
Post Office at Armagh ... ..	Board of Public Works, Dublin ... ..	Secretary, Office of Public Works	" 21st

## TENDERS.

**BALLYMARTLE.**—For enlargement of the Ballymartle Dispensary residence and the improvement of its sanitary arrangements. Mr. Richard Evans, Architect, 53 South Mall, Cork. Kelly & Sons, Kinsale (accepted), £212 os. od.

**WICKLOW.**—For supplying two sets of long Memel gangway frames and planks, with iron fittings, for the Wicklow Harbour Commissioners:—J. Pim, Steam Saw Mills, South Quay, Wicklow, £28 for the two sets (accepted). Note.—There was only one tender.



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The Temperature of the Rooms immediately beneath the Vulcanite Roof is more even in winter and summer than under any other Roof. When properly laid repairs are never required, and all Roofs are guaranteed. The Roof Surface can be used as a Garden, or for any other purpose. The cost of construction is even less than for a Slate or Tiled Roof. Lowest Rate of Insurance. More Fireproof than Slated Roofs.

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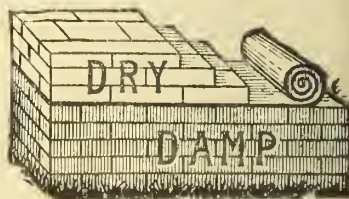
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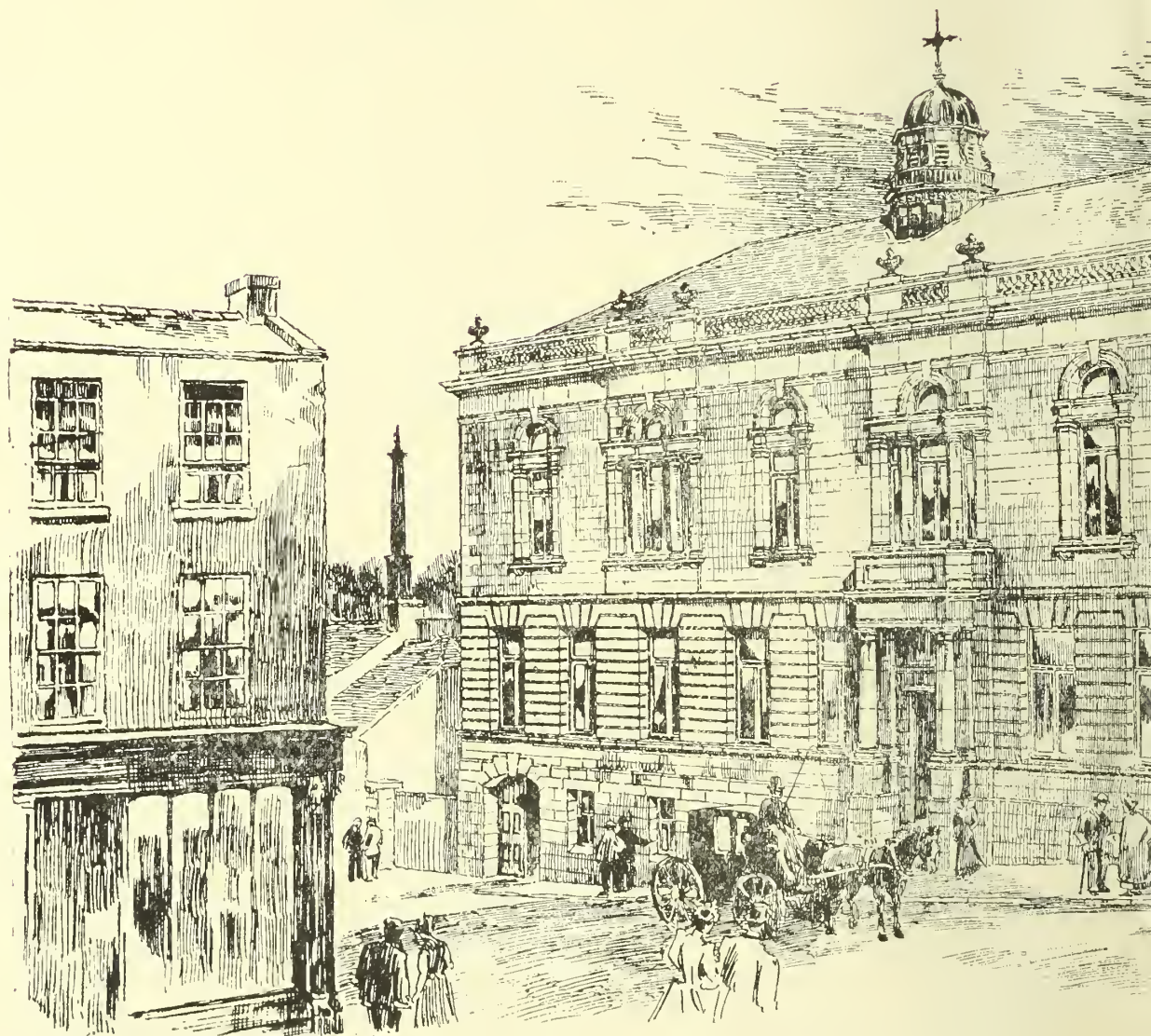
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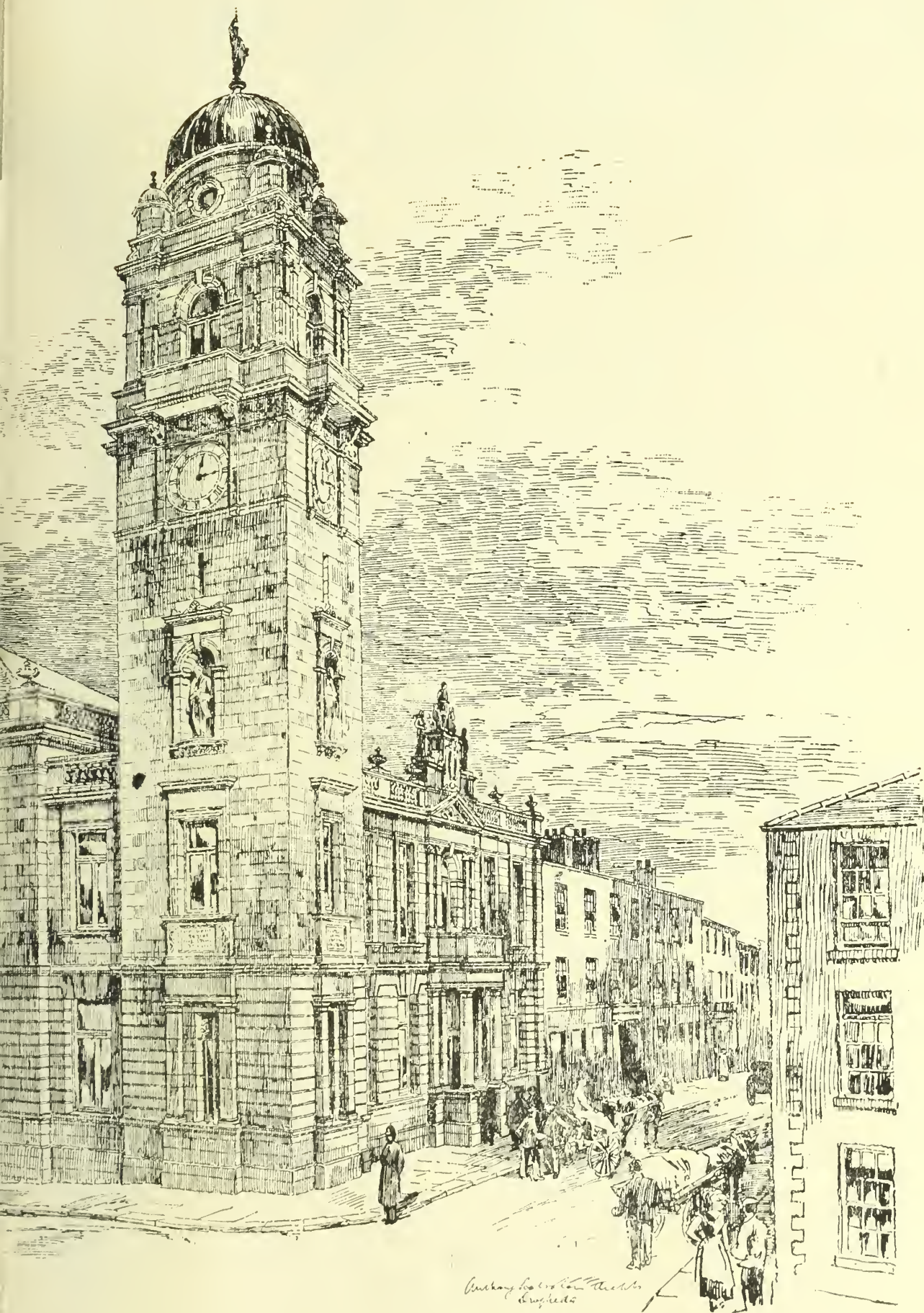


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# The Irish Builder

A JOURNAL DEVOTED TO

ARCHITECTURE, ✦ ARCHÆOLOGY, ✦ ENGINEERING, ✦ SANITATION,

ARTS AND HANDICRAFTS.

1st & 15th of the Month.

[Estab. Jan 1850.]

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## NOTICES.

The *Irish Builder* is published twice a Month, on the 1st and 15th, and may be ordered from any Newsagent, or direct from the Offices, -13 Fleet Street, Dublin.

We have also established a London Office at 15 Montague Place, Russell Square, W.C., and all English, Scotch, and Welsh inquiries concerning copies of the paper and advertisements should be addressed there.

It is the only technical journal in Ireland, and reaches Architects, Engineers, County Surveyors, Builders, Contractors, Artisans, Council Officials, Members of Trades Associations, and Public Libraries throughout the country. A specimen copy will be sent post free to any address on application.

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### Editorial.

Literary matter and drawings to be addressed to the *Editor*, and must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. We do not hold ourselves responsible for the opinions of correspondents.

Notes of works (especially contemplated works), contracts, reports, &c., are always welcome. Drawings and photographs are particularly acceptable.

### Publishing.

All business communications to be addressed to the *Manager*. Advertisements must reach the office two days before the date of publication. The charge for Contracts, Notices, Prospectuses, Competitions, &c., is 6d. per line. Other advertisement rates can be had on application.

### Payments.

Cheques and Postal Orders to be made payable to The Proprietor, *Irish Builder*.

The Arts and Crafts Exhibition will commence the week of the 19th inst., at the Royal University Buildings, Earlsfort Terrace, Dublin

## COMMENTS.

### Insanitary Police Barracks.

That ably-edited journal, the "Constabulary Gazette," has been calling attention to the disgraceful condition of the Depot of the Royal Irish Constabulary in Phoenix Park. For some weeks past the buildings seem to have been a hot-bed of typhoid fever, and the men stricken down have numbered more than thirty. The dead already amount to six, and the latest victim is a sergeant who had twenty-two years' service in the Force.

This is, indeed, a grim method adopted by the authorities to reduce our police, than whom no finer body of men exists. Their stalwart forms and splendid physique attract the attention of everybody, and as their duties are semi-military the dangers of their position are by no means light. Typhoid, or enteric fever, is preventible, and it is a disease that is almost always caused by emanations from foul drains. In this case it is undoubtedly so, and it is shameful that in these days when the science of sanitation is so thoroughly understood that our police barracks, and above all the headquarters themselves, should be so callously neglected. We have Royal Commissions on Army Sanitation, on Barrack Works, on Tommy Atkins' food, drink, and clothing, but who ever thinks of the poor policeman? Our Dublin military barracks are notorious for their whitened sepulchres, and so evil was their plight that in one—the Royal Barracks—it was found necessary to pull down a whole block of buildings to afford at least a partial remedy. These are not far distant from the Depot, and is the latter going to achieve a like sinister reputation? It is a case for the sanitary engineer, and we would advise Sir Andrew Reed to call in the highest expert in the city and have the present system thoroughly examined and everything put right according to the best modern practice. The doctor is all very well in his way, but he is only called in to mend the evils which the sanitary engineer can prevent altogether.

The death-rate in Dublin is at the appalling figure of 37.3 per thousand, and there died in our metropolis the week before last 98 persons in excess of the average for the corresponding period of the last ten years. Week after week the Registrar-General's returns tell the same sad tale, till we wonder if it is a City of Death. If Sir Charles Cameron, our Public Health Officer, cannot remedy this state of affairs for our citizens, the Government at any rate can look

after the health of its officials—a body of men of whom 't expects much, and who can only be efficient if their welfare is attended to and their habitations made healthy and wholesome.

#### More Engineers for District Councils.

Our comments in last issue on this subject have elicited the letter which will be found on another page, while another correspondent has drawn our attention to an advertisement in the "Derry Journal" of the 9th ult., from the Stranorlar Rural District Council, under the heading of "Architect Wanted." This august body sets forth in the usual felicitous terms that it is prepared to receive and consider applications from "competent Persons" (that terrible "person") to draw Plans, prepare Specifications, etc., and superintend the erection of Labourers' Cottages in the District, "as well as performing all duties appertaining to the office of Architect." Then again the wretched tender business—"Applicants to state the terms upon which they will undertake the work, which must include travelling and other expenses, together with the cost of the plans, etc., and for such copies of same as may be required." Then the last straw—"The Person [how impersonal this personage is?] appointed will be required to see that any improvements necessary in the existing cottages are properly carried out without any additional remuneration." To be sure! And the grand finale—"The lowest or any application not necessarily accepted." This distressful country cannot be so very distressful after all if we have any philanthropists amongst us eager to serve the ratepayers of their native land in the above high-minded and delightful fashion. What a glorious chance for the younger members of our Architectural Association to "rise on stepping stones of their dead selves to higher things," as the poet hath it. The Stranorlar Rural District Council is anxious to make their fame and fortune in the designing of picturesque cottages, with the usual privies and ashpits.

But if we have noble Councillors in the grim north the patriots of the emerald south are equally munificent. The Rathdown Rural District Council are burning to elect "an Engineer or other competent 'person'" to prepare plans, specifications, and estimates for a scheme for the erection of a number of Labourers' Cottages, with the kind addenda—"Applicants are requested to state on what terms they are prepared to take up the work."

The foregoing announcements speak for themselves and require no censure from us, as they are self-condemnatory. It would be a good thing if, as our correspondent suggests, our readers would send us in their experiences with a view to general discussion on the matter and forming a collective memorial to lay before the Local Government Board. They then might expect some redress, for the country practitioner suffers to an alarming extent from this substitution of imposture of which his city brother never feels the pinch.

#### Irish Marble in America.

The "Builder's Journal" has noticed in an American paper the following most interesting article on Irish marble, which we quote to show how great are our natural sources of wealth if we would only use them:—During the past year nearly one million dollars' worth of Irish marble, quarried within a few miles of Galway, has been imported into the United States for the decoration of fine public and private buildings. A lavish use has been made of it in the Columbia University buildings, and in the new university club house, Fifth Avenue, New York. In the club house the grand hall is supported by eighteen columns and pilasters of this marble in serpentine and green shades, highly polished and carved in the Celtic school of ornamentation. These columns are 36ft. high and 3½ft. in diameter. This marble was discovered more than a century ago, but the expense of quarrying and hauling it to tide water militated against its use. The late Eugene Kelly, the New York banker, was induced to use a small quantity of it in an office

building which he erected shortly before his death, where its beauty appealed to a number of architects, who began to use it. About two years ago a syndicate of Irish-American quarrymen leased the quarry and introduced Sullivan's patent American machinery for quarrying and dressing it at less than one-fifth the cost of the old hand process, and the low prices resulting from the new methods have created a large market for it. A great deal of it is to be used in the new Catholic Cathedral in London and in the Sacred Heart Basilica at Paris.

#### Board of Works Engineers.

That new political organ, "The Irish People," has excited itself quite unnecessarily about the engineers of the Irish Board of Works, and proceeds to vent its spleen thus—"Will it be believed that at the present moment the Irish Board of Works has not on its list of servants a single fully-qualified engineer? Yet it is a fact—and a scandal." This is, indeed, news to us, and we should like to know the writer's own definition of "fully qualified." Has the political element anything to do with it? Of course our readers know that the engineers of the Board of Works are as fully trained as any engineer can be, or else they certainly would not be appointed. The days are past, even in politics-stricken Ireland, when technical billets can be obtained by mere factional interest, and we have only commented on the paragraph to show how prejudiced a portion of the Press can become when dealing with the profession.

The Chairman of the Board of Works is also a target, but he was selected for his special knowledge of railways, gained as general manager of the Great Northern Railway Company, to carry out the beneficent project of light railways in the West and North of Ireland. This work he has done exceedingly well, and he has amply justified the expectations of Mr. Balfour, who appointed him. We would advise the writer in "The Irish People" to look facts in the face, to give fair play, and, finally, to carefully read the recently issued Annual Report of the Board of Works.

#### Our New Heading.

We have thought it advisable to change the heading on the outside of the cover to the bolder design now presented with this issue. It was drawn by Mr. F. Core, of Dublin, an architectural student of great promise, and our readers will join us in congratulating him on the excellence of his work. He is also responsible for the two pretty headings for the "Building News" and "Engineering News" columns. Mr. Core has likewise produced equally good drawings for other journals, and an exhibition of his designs will be seen at the forthcoming Arts and Crafts Exhibition. A reference to the "A. A. I. Jottings" will show that he has greatly distinguished himself in the Architectural Association.

A word of apology is needed to Mr. R. Caulfield Orpen, M.R.I.A.I., who kindly designed our late heading. Some alterations were found to be necessary after the design left his hands, and as he was unable to execute them himself owing to absence, the changes were made at the engraver's where the whole heading was re-drawn. This was obvious to anyone acquainted with Mr. Orpen's distinguished draughtsmanship, but we regret that the fact was not announced earlier so that strangers would not be misled. However, we trust that the matter has now been put right.

The A. A. I. held a most enjoyable smoking concert at the Grosvenor Hotel on Friday, 24th ult., when there was quite a display of vocal and instrumental talent.

At the meeting of the Dublin County Council yesterday the County Surveyor's salary was fixed at £850 per annum, with two assistants allowed him, each at a salary of £150 and a free office.

The Dalkey Urban Council will shortly advertise for an engineer for the township.

Do you want to increase your Business? Then advertise in the *Irish Builder* the only technical journal in Ireland.

# CLASSIC DETAILS AND THEIR APPLICATION.

By G. A. T. MIDDLETON, A.R.I.B.A., M.S.A.  
Author of "House Drainage," "Surveying and Surveying Instruments," &c.  
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## VII.—ITALIAN RENAISSANCE: BUILDINGS TREATED AS ORDERS.

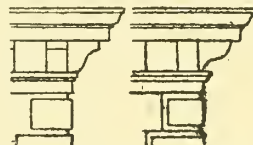
When Classic architecture was revived in Italy in the 15th century, known as the Italian Renaissance, the most noticeable feature was the manner in which it was at once adapted to the then modern requirements without the least of slavish copying. Nor, on the other hand, did it err in the opposite direction by the mere application of Classic details to buildings which were Gothic in form and principle. A somewhat similar thing had occurred before when Ptolemaic architecture arose in Egypt upon almost precisely the same lines as that of the Theban period of a thousand years before. Between the Roman and the Renaissance also there was a gap of a full thousand years; but this time it was not the same style which arose out of the ashes of the old, but a new style, fully adapted to present needs, based upon the principles of the old, and as instinct as that had

The entablature, which thus became the chief feature of the design, varied considerably in its design. In the Riccardi Palace at Florence, the architrave and frieze are but slightly indicated, while a heavy cornice is carried by heavy consoles. In the Spannochi Palace at Siena, as also in the Gondi Palace at Florence, the architrave and frieze are missing entirely, while the consoles in the Spannochi Palace are deep, and in the Gondi Palace are widely projecting. Again, in the Strozzi Palace, at Florence, the architrave is missing; but there is a deep plain frieze, with enriched mouldings, then consoles, and then cornice over.

Speaking of the cornice only, which was the one absolutely necessary part of the entablature for the purpose of properly crowning the building, Gwilt gives the following table of proportional heights:—

Palace.				Proportion of cornice to whole height.
Spannochi, at Siena ...	...	...	...	.081
Piccolomini, at Siena ...	...	...	...	.074
Pojana, at Pojano ...	...	...	...	.071
Strozzi, at Florence ...	...	...	...	.069
Pandolfini, at Florence ...	...	...	...	.069
Villa Montecchio ...	...	...	...	.069
Villa Caldoque ...	...	...	...	.069
Farnese, at Rome ...	...	...	...	.059
Gondi, at Florence ...	...	...	...	.057

As to the rest of the design, it was simple in the extreme. Great use was made of wall-surface, texture to which was obtained by rustication, the degree of rustication varying in



Two Intermediate Cornices, or Strings. (From Gwilt.)

most examples, the masonry being exceedingly bold when near the eye, and more and more finely faced the higher its position in the building. In a later school, however—the Roman, to which the Pandolfini Palace more properly



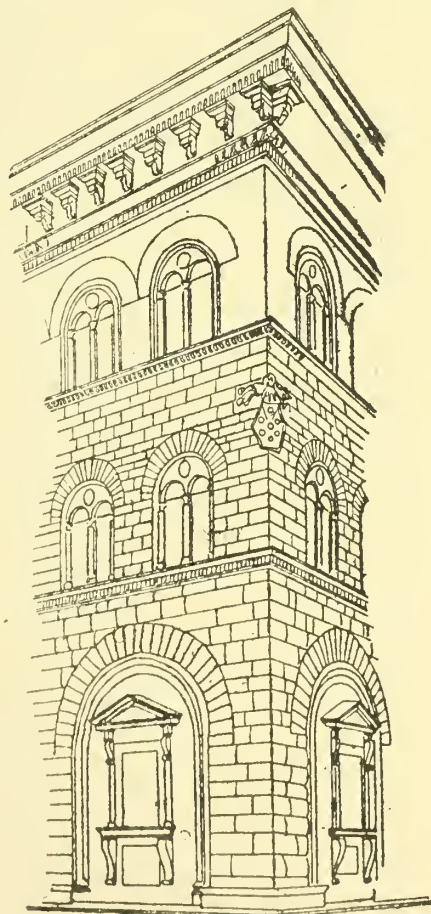
Spannochi Palace, Siena, probably by Francesco de Giorgio. (From Schütz.)



Strozzi Palace, Florence, by Cronaca. (From Schütz.)

been with all that pertains to architectural life—with vigour with originality, and with high sense of the beautiful.

One of the first results of this was the treatment of buildings as a whole—as single units to which the parts were subordinate. This was especially exemplified in the palaces, which, from the circumstances of the times, were necessarily square masses of solid masonry, with but few and small openings within reach of any street mob which might attack them. Given these conditions, all that was necessary to convert them into architectural units was to crown them with cornices proportioned to their own height, and this was accordingly done. No columns were used, but the buildings were left, of themselves forming complete orders without their aid.



Riccardi Palace, Florence, by Michelozzo. (From Schütz.)

belongs—the rustication is confined to angles and to the doorways; and in the Venetian school, to be referred to later, it is often absent altogether.

The simplicity of the buildings was further enhanced by the regular arrangement of the openings, with doorway usually in the centre of each front, and by the subdivision of their height into stories by the introduction of horizontal strings or intermediate cornices carried right across the front. These were never obtrusive, having just this minor function to perform, generally consisting of a small cyma and corona, with simple consoles under. Still, their depth is nearly that of the main cornice, Gwilt stating  $\frac{1}{15}$  of the height of the building, which is very little less than that of most of the main cornices, as given in the above table.

In most of the Florentine Palaces the windows and doors were semicircular headed and simple in treatment, with quite simple tracery in the upper stories—a relic of Gothic taste. On the ground floor, however, there was greater divergence of treatment, for in the Strozzi Palace we find small rectangular openings, and in the Riccardi and Pitti Palaces there are large arches with rectangular windows inset into them, these being enriched with sills and cornices carried by consoles, and the cornices crowned with pediments. All ground-floor windows, too, were necessarily protected with strong iron grilles.

The Pandolfini Palace is an entire exception to these rules, for the intermediate string is enriched with the guilloche; the upper story is set back from the lower, and the windows are treated with orders. It was a method of treatment adopted largely in Rome, as witness the Farnese Palace, but rare in Florence.

(To be Continued.)

## DUBLIN FOR THE ARCHITECTURAL STUDENT.

AN ADDRESS TO MEMBERS OF THE A.A. OF IRELAND, 1897.

By THOMAS DREW, F.R.I.B.A., PRES. R.I.A.I.

James Gandon is a great name among this galaxy of architects of Dublin. His great work is the Custom House, and there is much study to be got out of it. It always strikes me when I am showing Dublin to the stranger architect that he is taken by surprise with its dignified architecture, and, most of all, the Custom House fetches him. There is a cast about it out of the common, and a dignity of simple mass that gets away altogether from the School of Wren, or Hawksmoore, or Gibbs, familiar in London. Gandon was a sculptor first and an architect afterwards. There is a monumental disposition of parts in the Custom House that grows on one the more it is studied year by year.

If we except the stone soup-tureens which serve as *acroteria* and chimneys and *smoke*, some of the details of this building are exquisite studies. Smyth's River-God keystones are unsurpassable, and the pose and *role* which the four statues (Europe, Asia, Africa, and America) play in the composition of the north front, facing Gardiner Street, are of that true art which conceals art. In a little hall, seldom passed through (by any but victims going to be eviscerated, figuratively speaking, by the detestable inquisition of the Income Tax), it is worth while to look for a small-scale treatment of the Ionic order, unsurpassed by any great example. It would be hard, we admit, for our good friends, the official architects, who are housed in this pile, to "live up to it." One feels that it is essentially frivolous for the Board of Works to court the Manes of the late departed Queen Anne, and curly-wig its pediments in its official works.

Robert Mack was architect of Powerscourt House in William Street, and it is no despicable work even for 1780.

Vincent Waldre, a whilom architect of the Board of Works, was a clever scene-painter architect about 1790. His architectural measure is to be taken in St. Patrick's Hall, the one great State apartment of the Castle. With his own hands Waldre painted on the oval ceiling of my

Lord Newcomen's drawing-room the sweet little cherubs that float up aloft on French grey skies, and now keep watch over the dear head of our Sir Charles Cameron, chief sanitary officer of our City of Dublin, and an honorary Fellow of our Institute of Architects. You can turn into many a house in Dublin and find bits of interest like this ceiling. I could show you a house in Mountjoy Square where the mantel-pieces frame plaques of Wedgwood's that are priceless. The student might do worse, for instance, with an idle hour than to turn into the Church Representative Body's house in St. Stephen's Green and study the bold stucco decoration, thumb-moulded and modelled on walls and ceilings, and Angelica Kaufmann's lovely decorative painting in the old drawing-room and ball room, and some exquisitely detailed Italian chimney-pieces.

I have not even touched upon Mediæval Dublin, as illustrated by its few surviving fragments, chiefly in its two cathedrals. It is a marvel that there is so much good Gothic work left in Dublin, and that it is so little studied. While there is nothing of the fourteenth or fifteenth century to study, there is good work of the thirteenth, enough for the student to discipline himself in drawing and measuring in the methods of Mediæval work, of its constructive origin, and the scale of its detail.

St. Patrick's Cathedral presents more for study than is generally appreciated. It has a very symmetrical and beautiful plan which has been preserved through all its indignities, mutilations, and restorations. It is worth measuring and laying down to demonstrate that the design was conceived on a rigid system of equal equilateral triangles applied to plan and section and elevation of the nave and choir, arcade, triforium and clerestory. There is some old and genuine work in the choir and north choir aisle. There are some neglected Mediæval monuments that should be recorded and published. There is a Lady Chapel so well restored by Carpenter in 1845 that the student may regard it as a perfect preservation of beautiful work of 1255, as good as work of that period in the Temple Church, London, from which came, if not all from Coeval Salisbury Cathedral, perhaps some inspiration by Henry the Londoner, the Anglo-Norman Archbishop of Dublin. There is a fragment of the Church of St. Patrick de Insula, precedent to its adoption as a collegiate and ultimately cathedral church by Archbishop Comyn, 1190, not yet investigated.

But of the old intra-mural Cathedral of the City, the Danish foundation of their Christchurch (Cathedral) of the Holy Trinity, there is no room to write within the compass of a paper like this. It is a subject for one as long in itself. There is enough left of fragmentary ancient work of the twelfth and thirteenth century and of beautiful detail to illustrate its history; and its store of records in MSS. is great and unbroken from the time of Sitric, the Danish king-founder in 1038, and the Anglo-Norman superstructure of 1190 and 1234 yet stands upon the Crypt Church of the Christianised Danes of 1038. The story of the Dublin Cathedrals is yet unwritten by the first architect who has had the privilege of ransacking their stores of record, save in a brief account in Murray's latest edition of his, a handbook of Ireland, and in "The Builder" series of Cathedrals of Great Britain and Ireland.

**Mural Tablet, Mission Church, Townsend Street.**—A mural tablet of uncommon design has just been placed in the Mission Church, Townsend Street, Dublin, to the memory of the late John Irwin. It is composed of Corsham Down bathstone, finely combed with Gothic mouldings, very sharp and full of detail. Standing out in deep relief is a moulded corbel, supporting pilasters of same material, with Cork red polished shafts to caps, annulets and bases, over which is a string course carrying the tympanum, in which is carved in bold relief a "crown of glory," with a ribbon over, containing in solid raised letters, "Well done, good and faithful servant," the whole surmounted by a handsome moulded capping. The entire work was executed by Mr. Louis F. Harrison, Sculptor, 29 Great Brunswick street, Dublin.



**Armagh.**—The Clerk of the Armagh Urban District Council has received the plans of the new Post Office. It is a one-storey building, with cupola and columns of black polished marble, and apartments are provided for the caretaker.

**Ballyclare.**—Plans, which can be seen at the works, have been prepared for rebuilding a dyehouse for the Whitepark Finishing Company, Ballyclare.

**Belfast.**—A site has been selected at the corner of Donegall Square, and Donegall Place, for splendid new buildings for the Bank of Ireland.

Handsome villas have just been finished at Adelaide Park, from the designs of Mr. James G. Lindsay, architect, of Glengall Place.

Tenders have been invited for building a Warehouse in Brunswick Street. The architects are Messrs. J. J. Phillips and Son, 61 Royal Avenue, and the quantities have been taken out by Mr. S. C. Hunter, Scottish Provident Buildings.

The new Woodvale Presbyterian Church was recently opened by the Moderator of the General Assembly, the Rev. D. A. Taylor, M.A. The new Church occupies an excellent and commanding position at the junction of the Whiterock and Woodvale Roads, having an outlook over Woodvale Park. Its tower and spire forms a conspicuous object approaching from the Shankill Road. Accommodation is provided for upwards of 1,000 people by the adoption of a plan consisting of nave and aisles with transepts, covering a space of 90 feet by 70. The central doorway is divided by a granite column, and surmounted by a boldly moulded arch. Other doorways afford also access to the ground floor and galleries, one of them being placed in an angular projection, with good effect. A special feature is made of the tower which terminates in a broached stone spire, at a height of 120 feet. All the large windows have stone mullions and traceried heads. The gables are treated with simple copings and kneelers; and the walling, which is of dark grey slate rock from Ballygowan, is relieved with dressings of Giffnock sandstone. A simple treatment of geometrical Gothic has been chosen. All the windows are filled with cathedral glass in lead work. Much of the internal joinery is of pitch pine and American walnut polished, whilst the sheeting is of Carolina pine. As arranged by the Presbytery, the roof is open to the ridge, and the exposed principals and timber work have a good effect. A space has been reserved for a future lecture-hall and church rooms, and the ground will be enclosed with a new iron railing and gates. The heating was carried out by Messrs. Musgrave & Co., and Mr. James Blair, Townsend Street, executed the gasfitting. The contract was executed by Mr. Thomas McMillan, who has carried out the work in a very satisfactory manner. The architects were Messrs. Young and Mackenzie. The cost of the building was some £5,000.

**Blackrock.**—The proprietor of the Clermont Arms, Mr. Deery, is said to contemplate the expenditure of a considerable sum of money on the hotel.

A movement is on foot for the erection of a Public Library in connection with the township.

**Bray.**—A report has been presented by the Public Health and Artisans' Dwellings Committee, recommending

the erection of proper dwellings in various parts of the township, the demolition of premises unfit for habitation, and the opening up of certain roads.

**Carlow.**—The beautiful new pulpit, which has been recently erected in the Cathedral as a memorial to the late Most Rev. Dr. Comerford, Coadjutor Bishop of Kildare and Leighlin, was dedicated on Sunday fortnight. It was designed by Mr. J. C. Buckley, Youghal, and we hope to publish a full description later on.

**Castlebar.**—A new Roman Catholic Church is being built at Castlebar from designs by Mr. Walter G. Doolin, M.A., of Dublin. The chancel, side chapels, sacristies, and the double transepts, both north and south, are roofed, and the framed trusses for the aisle roofs are being set in position. The clerk of works is Mr. Cotter.

**Celbridge.**—The Rural District Council of Celbridge, No. 1, at their meeting of 27th ult., received tenders for the erection of four Labourers' Cottages in the village of Leixlip, in accordance with plans and specifications of their architect, Mr. L. A. McDonnell, 33 Kildare Street, Dublin.

**Clones.**—A public meeting was held in the Town Hall for the purpose of dealing with the question of the proposed site for the new post office. Resolutions were passed that the intended site was not suitable, and that a fresh one should be selected.

**Clonfert.**—Clonfert Cathedral has, during the past few years, been under restoration at the hands of Mr. J. F. Fuller, F.S.A., architect. The chancel has been thoroughly restored. The decayed wooden flooring has been removed, and specially designed tiles laid down, and the plaster has been taken from the walls of this part of the building and the ancient stonework pointed and repaired. Stone mullions have been placed in the windows. Two of the windows have been filled with cathedral glass, and six with stained glass. The red paint has been removed from the stone pillars of the ancient east window, and also from the stonework of the chancel arch, and from the stonework of other parts of the building. A bishop's throne of carved oak, in memory of Bishop Young, has been erected in the chancel. Two two-light stained glass windows, by Messrs. Watson, of Youghal, representing the four Evangelists, have been placed on the south side of the chancel. The "Meath" Protestant Industrial School, Blackrock, having expressed great interest in the restoration of Clonfert Cathedral, the Committee of the Institution presented a handsome Communion table of carved oak to the cathedral, specially made by the boys of the school, in accordance with Mr. Fuller's design. Two stained glass windows, by Messrs. Hardman, of Birmingham, representing St. Peter and St. Paul, have been placed at the east end of the Cathedral. A brass Communion rail, designed by Mr. Fuller, has been erected in the chancel. Suitable stone steps have been placed in the chancel. The sacristy has been thoroughly restored without altering the ancient character of the structure. The modern plaster has been removed from the walls, and from the ceiling, thus bringing to light the marks of the old hurdle roofing. The roof and the floor have been concreted. New windows, new doors, and a new stove have been placed in this part of the Cathedral. A thorough system of drainage has been carried out around the entire building. The roof of the fabric has been repaired. The belfry tower has also been repaired. New landings had to be erected in the tower, the old ones having become quite decayed. Other necessary work has also been done. During the last few months the work of restoration of the nave has been undertaken. The old high-backed square pews have been removed, and the gallery at the west end has been taken down. Several arches, which had been filled up, some with brick and others with lath and plaster, have been opened out, and the plaster has been removed from the walls of the nave. These walls, which are in many places cracked, and in very bad repair, are now being carefully pointed and re-

stored. There were originally two transepts; one is now in ruins and roofless, the other is completely gone. During the progress of the work in the nave, the stone arches of the transepts, which had been completely covered with plaster, have been brought to light. On removing the plaster from a portion of the walls of the vestibule of the Cathedral, some fragments of elaborately carved stonework were discovered. The greater part of the work of the restoration of the Cathedral has been carried out by Messrs. Sharp and Emery, of 17 Great Brunswick Street, Dublin. £1,467 18s 4d have been already subscribed towards the cost of the work, but it is estimated that £2,000 will be required to complete it—£1,000 of this amount for the restoration of the nave, and £1,000 to rebuild the transepts. It is proposed, also, to carry out the repair of the stone groining of the arch over the vestibule; to have the floor of the nave, sacristy, and baptistry laid down with encaustic tiles of a special design; to have the nave re-seated with suitable chairs; to have stone mullions placed in the windows of the nave, and to erect additional windows of stained glass in the chancel, sacristy, and nave; and to provide a new entrance door of oak of appropriate design. The Cathedral is situate in Co. Galway, and was founded in the sixth century.

**Cork.**—New Offices and Butter Store are about to be erected in Kemp Street, Cork, for Messrs. Lunham Bros., Limited. The architects are Messrs. Robert Walker and Son, 17 South Mall.

The Cork County Council have adopted a disused workhouse in Youghal as an auxiliary lunatic asylum for at least 200 imbeciles. The plans are being prepared by the City Engineer and by the County Surveyor.

**Dalkey.**—Mr. Allen, contractor, lately wrote that owing to pressure of work he was unable to carry out the erection of Artisans' Dwellings in the township. His tender was £1,760. The next lowest was Mr. Quirk's, Dalkey, which was accepted, the amount being £2,458.

**Dublin.**—It is proposed by the Governors of the Dublin Technical Schools to erect new technical schools in the northern side of the city.

Tenders are to be lodged to-day for the erection of Labourers' Cottages, in two lots, for the South Dublin Rural District Council—24 in Rathfarnham, and 24 in Clondalkin.

Some important improvements have been made in connection with Hyne's Restaurant, Dame Street, by Mr. Bethell, proprietor of the Grand Hotel, Malahide, who has been conducting this well-known establishment for upwards of twelve months past with satisfactory results. A commodious and costly fitted smoke-room has been provided downstairs. The walls are laid in ornamental tiles, and the flooring is of beautiful terrazzo work. Armchairs and lounges abound. There is a plentiful supply of electric light, and at the end of the room is a well-stocked bar. The grill room, dining room, and luncheon bar have all been refitted in the latest style. In the kitchen department special care has been taken to provide all the latest improvements, with the object of ensuring perfect cleanliness in the handling of the food. The proprietors have arranged a new scale of prices both for viands and drink, which they anticipate will give general satisfaction. The work of painting and decorating was done by Messrs. Henry Gibson and Son, of Henry Street. Messrs. Kiernan, of Talbot Street, carried out the necessary structural alterations in connection with the new smoke-room, and Mr. T. W. Little of Harcourt Street, looked after the plumbing work.

**Edenderry.**—The Edenderry, No. 1, Rural District Council are about to make an improvement scheme for the electoral divisions of Ballyburley, Ballymacwilliam, Bracknagh, Clonbulloge, Clonmore, Croghan, Edenderry, Esker, and Monasteroris, and the estimated cost of the scheme is £4,134.

**Galway.**—A considerable sum is about to be spent on the repairs of the Methodist Church.

**Kinsale.**—The Guardians of Kinsale Union are about to enlarge the Ballymartle Dispensary residence and improve its sanitary arrangements. The architect is Mr. Richard Evans, 53 South Mall, Cork.

**Leighlin.**—The ancient cathedral at Leighlin is about to be renovated, and a restoration fund has been started.

**Limerick.**—The foundation stone of a new Presbyterian church in Limerick was laid by the Moderator, the Rev. D. A. Taylor, M.A. The site is at the north side of Lower Mallow Street, where that thoroughfare is intersected by Henry Street. The edifice will face Henry Street, while the dip in Lower Mallow Street, where it stretches towards the quay, will enable the builders to construct a lecture-hall under the church, the ground floor of which will be slightly raised above the level of the Henry Street roadways. The fabric will be of brick, with dressings of Portland stone for the arches, windows and aisles. The architect is Mr. G. C. Ashlin, of Dublin, and the style Early English. The width of the church will be 46 feet, and the length, including nave and choir, 88 feet. The height is to be 48 feet, and the two aisles are to have a width of 9 feet 6 inches each. At either side of the apse there are to be vestries for the choir and minister, and the two aisles are to be separated from the nave by columns of polished Aberdeen granite. The front of the church, which, as stated, will look towards Henry Street, whence it will be entered by two doors leading into a vestibule, promises to be exceedingly handsome. It will be faced with Ruabon brick, have a rose window admitting light to the vestibule, gallery and hall between the street entrances and the entrances to the interior of the church, while a tower and spire rising to a height of 80 feet will stand at the eastern side of the façade. The builders are Messrs. Ryan and Son, Limerick, the clerk of works, Mr. James Henderson, and their task will, it is anticipated, be completed within twelve months. It will accommodate a congregation of 500 worshippers, and will be a vast improvement on the present church in Glentworth Street. The cost is estimated at £6,000.

**Lisnaskea.**—Tenders were due on the 20th ult. for the erection of a National School. Applications were to be sent in to the Rev. John Coulter, of Newtownbutler.

**Londonderry.**—Large Extension of Shirt Factory.—It is well nigh half a century since the firm of M<sup>r</sup>Intyre, Hogg, Marsh & Co. became associated with that trade in Londonderry, in which it now occupies so prominent a place, viz., the Shirt Trade. Early in the fifties the late Peter M<sup>r</sup>Intyre, in conjunction with Adam Hogg, now also deceased, commenced business in that City. The factory then started was situate in Foyle street, adjoining the Butter Market, and was an adjunct to their large Glasgow warehouse. A few years later, such was the growth of trade that larger and more commodious premises became a necessity, and in 1862 the present City Factory in Queen street was commenced. This handsome building, which, even at this present day, stands well to the front among the many imposing shirt factories which adorn the town, was the first attempt to give an exterior of dignity and weight in some measure commensurate with an industry which is on all hands acknowledged to be the main artery of Derry's business life.

It was the ambition and the dream of the late Mr. Hogg that the splendid front and side elevations, which have been so much admired for many years, should one day stand four square, and that a vast factory should cover the whole of that very ample space which the far-sighted partners had secured; that the whole area from Queen street front right back to North Edward street, and from Patrick street to the rear of Clarendon street should mark the finished limits of one of the most splendid factories in Derry. That dream

is now to have its fulfilment, and that ambition its realization.

It is not in any way to be imagined that the years which have passed between the laying of the first stones of the City Factory and this now much larger decision to complete the partners' first ideal have been in any way marked by stagnation in trade. Indeed, it has been far otherwise. Many outlying districts became contributory, and studded throughout the country were branch factories. From Donegal and the surrounding country for many years past weighty consignments of finished goods have been sent into the Derry centre, and even at this present time a very commodious and well-equipped Factory at Letterkenny is at present in course of erection to suit the necessities of the now extensive connection of the firm in that locality.

Apart altogether from Irish developments the growth and importance of the firm of McIntyre, Hogg, Marsh & Co. in the employment of labour and distribution of manufactures have been rapid. The original Glasgow warehouse has been for a long time superseded by headquarters in London and Manchester, whilst at Taunton, at Cheddar, and elsewhere, large factories on lines similar to the City Factory have likewise arisen. Thus it will be seen that in localities best adapted for the industry, this well-known firm has now immense producing agencies, and in London and Manchester the great emporiums of the world's trade, the distributing centres of the house stand in the front rank of those who rule and reign in the Commerce of the Nations. Messrs. Young and Mackenzie, Belfast, were the architects for the original building and are also architects for the extension, and the Contract for the building has been entrusted to Mr. J. Ballintine, Londonderry, an eminent local builder.

**Oldcastle.**—On 15th ult. the foundation stone was laid of the Oliver Plunkett Memorial Church at Oldcastle, Co. Meath. The architect is Mr. W. H. Byrne, Suffolk Street, Dublin.

**Omagh.**—The Omagh Rural District Council have decided to erect no fewer than 119 cottages under the Labourers' Act.

In the erection of the Omagh Asylum (Mr. C. A. Owen, of Dublin, architect) great care has been taken in carrying out the ventilation, Cousland's "Improved Climax" patent directing invisible roof ventilators and ornamental turret ventilator having been used, supplied by the Climax Ventilating and Heating Company, Limited, 93 Hope Street, Glasgow.

## THE ORMOND HALL, Upper Ormond Quay, Dublin.

This building, which forms the subject of our illustration in this number, has been erected by the congregation of Ormond Quay Presbyterian Church for the purposes of Weekly Meetings, Sunday School, and similar purposes. It stands on the site of some very old houses, and considerable difficulty was experienced in supporting the neighbouring structures while it was being built. The style adopted is somewhat Jacobean in character, and the materials used on the front are red brick with granite dressings. The two-storied bow window is a conspicuous feature of the elevation. The architect employed to design the building and to superintend its construction was Mr. W. M. Mitchell, F.R.I.B.A., of Leinster Street, Messrs. J. P. Good being the builders; both of Dublin.

**Messrs. Brooks, Thomas and Co. (Ltd.)**, timber merchants, Sackville Place, Dublin, have secured the contract for the supply of goods to the Urban Council at Rathmines, Dublin.



**Armagh.**—The Urban District Council of Armagh have approved of the specification submitted by Mr. J. Finlay Peddie, for sewage disposal works upon the septic tank system, and a loan of £12,000 is to be applied for.

**Athlone.**—At the weekly meeting of the Athlone Urban Council on Wednesday evening, Mr. R. English, chairman, presiding, a communication was received from the Local Government Board, stating that the Lords Commissioners of her Majesty's Treasury had authorised the issue of a loan of £4,500 at 2½ per cent, repayable in thirty years, for the purpose of the extension of the local gas works. The clerk was instructed to write to the different contractors to have the work immediately proceeded with.

**Belfast.**—The Corporation are about to lay down tramway lines, and have invited tenders for the supply of about 2,200 tons of steel rails, fish-plates, tie-bars, &c. Mr. J. C. Bretland, M.I.C.E., City Surveyor, was responsible for the plans and specifications.

**Boyle.**—At the next monthly meeting of the Boyle Commissioners, a proposal that steps be taken to light the town by electricity will come up for discussion.

**Bray.**—At a meeting of the Urban Council, Messrs. Isaac Molloy, J. H. Ryan, C.E., and E. Liller, attended on behalf of the proposed Promenade Pier, and tendered a licence to build pier. A deposit receipt for £2,500 was deposited as proof of bona fides. The licence was sealed.

**Causestown.**—Tenders have been invited for the execution of sundry works at Causestown, County Meath, including new Drainage and Water Supply, the latter comprising concrete Storage Tank, Filter Chamber, Iron Mains, etc. The plans and specifications have been prepared by Mr. E. A. Logier, A.M.I.C.E., Westland Row, Dublin.

**Clones.**—The matter of the drainage of the town was before the Council at a recent meeting, and no doubt a sewage scheme will shortly be prepared.

**Clontarf.**—Mr. P. C. Cowan, M.I.C.E., Local Government Board Engineer, held an inquiry at the Town Hall in respect to an application made by the Urban District Council to the Board of Works for a loan of £1,100 for the construction of gullies, new sewers, paths, etc., in the township. Mr. W. G. Perrott, Town Surveyor, gave evidence as to the necessity of the works, and handed in his estimate. The valuation of Clontarf is £24,823.

**Dundalk.**—A most important report on the water supply of Dundalk was read at a meeting of the Urban Council, from Mr. Newton, of Manchester, an engineer employed for that purpose by the Council. Though Dundalk has a very complete system of water works the pressure in the upper part of the town has long been defective, though the cause has been a matter on which opinions differed. Mr. Newton, in the course of an exhaustive report, stated that at two points there was a very serious draught on the pipes which he failed to account for by any legitimate consumption. Assuming these to be not detected and remedied a new water main will be necessary to supply the upper end.

**Galway.**—At the adjourned quarterly meeting of the Galway County Council a communication was read from the Congested Districts Board with reference to the establishment of piers, boat slips, and other improvements carried out in the congested districts for the development of

the fishing industry and giving the people in the congested districts more facilities for attending fairs and markets, stating that they considered a motion should be brought forward at the County Council meeting that the works should be taken over by the Council. On the motion of Mr. T. Byrne a committee was appointed to deal with the matter, and instructed to write to the Congested Districts Board declining positively to take over the works.

**Greystones.**—A scheme is proposed for the laying of a new water main, at a cost of £900, in connection with the Greystones water supply. The water is at present obtained from the stream and reservoir of Temple Carrig, and is conveyed through a 3-inch pipe. This pipe has been found to be too small, and it is proposed to substitute a 5-inch pipe. Many persons would prefer to have the Vartry water, which could be obtained at a small cost, and when it was intimated that the Local Government Board had decided that the charge would not be local, but on the whole district, the witnesses seemed unanimously in favour of obtaining the Vartry water.

**Howth.**—The *Irish County Council Gazette* says:—For several years the question of lighting Howth has been agitating the minds of many of the residents. As far back as 1892 a committee was formed to deal with it, and after an exhaustive inquiry they decided that, having regard to all the circumstances of the district, oil was the best possible light to adopt, and they proposed to erect about seventy lamps. They appealed to the residents for subscriptions, with the result that £220 for the purchase of the lamps, and £80 for the maintenance was guaranteed, and it seemed as if the lighting of Howth was practically an accomplished fact. But the committee had not counted on the legal difficulties in carrying out their project, and these proved so formidable that it had to be abandoned. But what could not be done in 1892 could have been done any time since the passing of the Public Health Act of 1896, which conferred powers of lighting such districts on the Rural Sanitary Authority, and now, of course, the North Dublin District Council is the body to deal with the matter, and it is to be hoped that the much-needed improvement referred to will be carried out without further unnecessary delay.

**Limerick.**—Steps are being taken in Limerick County concerning the construction of a line of light railway between Mitchelstown, Co. Cork, and Limerick City. The proposed line would run through Ballylanders, Knocklong (intersecting the G. S. and W.), Hospital, and Herbertstown, and forming a junction with the Waterford and Limerick line at Killonan. The line, of course, would be on the Baronial Guarantee system, and the County Councils of Cork and Limerick would have to consent to the project. Mr. Michael Condon, County Councillor, Ballylanders, has charge of matters in South Limerick, and Mr. W. Lundon, Killeely, is obtaining the views of the ratepayers of the other portion of Limerick on the subject. The line will probably be opposed by the G. S. and W. and L. Railway Companies.

**Monasterevan.**—A scheme is on foot for the lighting of Monasterevan, and it was resolved that an application be forwarded to the Local Government Board to hold a local inquiry into the matter.

**Nenagh.**—The Nenagh Town Commissioners contemplate introducing electric light into the town. The local Gas Company charge 6s 8d per 1,000 cubic feet, while it is estimated that the maximum cost of electric light would be about equivalent to the price of gas at the rate of 2s 6d per 1,000 cubic feet.

**Roscommon.**—The vexed question of the waterworks scheme was again before the Council. The report from the Local Government Board's officials on the water supply for Roscommon was read. As was announced some time ago,

that report allowed a time limit. after which, if the Council did not comply, the Local Government Board would cause the waterworks scheme for Roscommon to be executed at the expense of the Union. The Council decided to do the work themselves, and the clerk was directed to write to the county surveyor on the matter, with a view to asking those who tendered before for the execution of the works whether they would do them now at the same terms. Three-fourths of the cost will fall on the town, one-twelfth on the rural district, and one-sixth on the union at large.

**Thurles.**—A public meeting of the Thurles ratepayers unanimously approved of a new water supply scheme for the town, as a recent outbreak of typhoid was traceable to the water supply.

**Youghal.**—At a meeting of the Youghal Urban District Council, Mr. R. Carey, J.P., presiding, tenders were received for the construction of a sewerage scheme for the Strand, Youghal, drawn up by Mr. Hill, C.E., Cork, and sanctioned by the Local Government Board. Mr. Michael Connors, Youghal, was declared contractor at the sum of £1,600, his being the lowest tender. Three other tenders were also received.

The Youghal Urban District Council have decided to contribute the sum of £500 towards the cost of stopping the encroachment of the sea on portion of the railway line. It is estimated that the work will cost £6,000, and it is expected that the County Council and the other local authorities will make up £2,000 between them, the rest of the expense to be incurred by the Great Southern and Western Company.

## BOOKS RECEIVED.

**State Railways for Ireland.**—The Fabian Society of London has just issued its new tract on "State Railways for Ireland." It is pointed out that Irish railway rates and fares are the highest in the world, but they ought to be the lowest, as the lines cost only £14,000 per mile to construct against £45,000 per mile in England. Goods rates are frequently 40 and 50 per cent. higher than for corresponding goods and distances in England. There is no doubt that the industrial development of Ireland has been greatly retarded by the want of proper railway facilities, and as an instance it is stated that the zinc mines of Nenagh would have sent out three times the quantity of mineral if they had only got proper freights from the railways. The cost of State administration, and the conditions of German and Belgian railways are explained. The pamphlet is a very useful one, and costs only one penny.

**A.A.I. "Green Book."**—The "Green Book" of the Architectural Association of Ireland, for the Session 1899-1900, lies before us. It contains the Bye-Laws, Syllabus of Meetings, List of Members, Annual Report, &c., as well as the previous Inaugural Address delivered by Mr. J. Howard Pentland, F.R.I.B.A., R.H.A., late President. The Association is doing excellent work, and it fills a distinct gap. There are classes in Design, Construction, Estimating, &c., while good lectures are periodically delivered to all comers. The newly-elected officers are:—President, Mr. George P. Sheridan, A.R.I.B.A.; Vice-Presidents, Mr. Joseph Holloway and Mr. M. J. Tighe; other members of Committee, Messrs. Ashworth, Batchelor, Butler, Coleman, Hudman, Orpen, O'Callaghan, Pentland, Scott, Webb, Geoghegan, Boucher, Sandall, and H. Allberry and F. G. Hicks, Hon. Secretaries. We strongly advise all our student readers to join without delay. The address is 22 Clare Street, Dublin, and the entrance fee and annual subscription are only ten shillings each.

**Architectural Hygiene.**—This is the title of a concise and complete text-book on sanitary science as applied to buildings, published by D. Fourdrinier, at *The Builder* office, 46 Catherine Street, London, W.C. The authors are Banister F. Fletcher and H. Phillips Fletcher, and the greater part of the contents of the book appeared in the Students' Column of *The Builder*. The price is a modest five shillings, and never was there better value offered for the money. Our contemporary does everything well, and this first-class production is just the manual that the weary student has been seeking for. The literature on sanitary science is perfect chaos, and to study even one branch it is necessary to consult a regular library of books. As regards architectural sanitation this is now remedied in the volume present, which concisely treats of sanitary legis-

lation, site and foundations, sanitary construction, house drainage, disposal of refuse, water supply, ventilation, heating, lighting, &c. There are no less than 305 first-class illustrations, all of them showing the latest and most approved methods of work and execution. These alone are a splendid recommendation for the book, and for our part we are delighted. The chapter on lighting, though, might be very considerably expanded, for the information is meagre. The same remark applies to one or two other chapters, but no doubt the next edition will see these enlargements accomplished.

**Quantity and Quantity Taking.**—This useful little book is also published from *The Builder* Office, and originally appeared in the same manner in the Students' Column. The price is 3s. 6d. It is a student's handbook pure and simple, and is thoroughly reliable. Much information is contained in a small compass, and clear diagrams are given showing how work should be measured.

**Graphical Arithmetic and Graphical Statics.**—Exercises on these subjects are given in the shape of a pamphlet, by Fras. C. Forth, Assoc. R.C. Sc. I., with a view to providing a systematic course of practice in graphical processes. Many of the problems have been taken from examination papers, and they relate to beams, moments of forces, and bending moment, stress diagrams, arches, etc., and should prove very valuable to the student. The book costs 1s. 3d., and is published by John Heywood, Deansgate and Ridgefield, Manchester.

**Archæological Journals.**—We have received the *Journal of the Royal Society of Antiquaries of Ireland*, and the *Journal of the Waterford and South-East of Ireland Archæological Society*. The former contains an interesting account and sketch of Moira House, Dublin, and description and illustrations of Armooy Round Tower, Co. Antrim. Oronsay Priory and Iona Cathedral are also well described and depicted. The other matter is mostly purely antiquarian.

**Catalogues.**—Messrs. Colledge & Bridgen, 66 and 67 Church Lane, Wolverhampton, send us an exceedingly well got up and useful catalogue with hundreds of beautiful illustrations, giving all the information that an architect or builder could wish relative to ironmongery and fittings of every description. We notice with pleasure that the price is always given below the illustration of each article, which facilitates specifying and orders immensely. It is unnecessary for us to refer to any class of goods in particular where all are so excellent, for Messrs. Colledge & Bridgen's reputation is of the best, and their business methods prompt. A copy of this catalogue should be in the office of every Irish person connected with the building trade.

E. H. Shorland & Brother, Drake Street Works, Manchester, have forwarded a copy of their new catalogue, just published, which contains plates and prices of their celebrated patent Manchester Grates, Stoves, Exhaust Roof Ventilators, Inlets, &c. The catalogue is increased in size, and has many new designs, printed in different colours, with tinted paper to keep the three sections separate. The Ventilators, Inlet Tubes and Panels are all made by special machinery, and are exceedingly strong and well finished. The open fireplace Manchester Stoves are now made in ornamental glazed Faience, as well as in iron. There are many thousands of these stoves in use in hospital wards throughout the Kingdom, and they are now recognised to be the best stoves for hospital use. We recommend every architect to apply for one of these valuable catalogues at once.

## THE ARCHITECTURAL ASSOCIATION OF IRELAND.

### INAUGURAL ADDRESS.

On 17th ult. the Annual General Meeting of the Architectural Association of Ireland was held in the Grosvenor Hotel, Mr. George P. Sheridan, A.R.I.B.A., presiding.

The minutes of last meeting having been confirmed, the Secretary read the annual report, which showed that the membership now numbered 111.

In moving its adoption Mr. Ross said the progress of the Association had been well maintained, and he hoped the non-attendance of junior members at classes, referred to in the report, would be more than made up for this year. In this country they suffered very much from the want of professional classes for instruction, and now classes were provided for the Association, and one of the objects of the Association was to provide classes for the members.

Mr. Walter Doolin, in seconding the resolution, said a number of young persons, who in the beginning were too

noisy to join it were now its most zealous supporters. He exhorted them not to join themselves with any other association. Let the Architectural Association be clean and independent of all others, because he believed if they did join another body they would be eaten up and made the same muddle of as was made of a similar architectural association twenty years ago.

The Treasurer (Mr. Webb) having laid before the meeting the annual balance sheet, which showed an increase of £12 6s. 8d. in the amount carried forward as compared with last year,

The President read the Inaugural Address. He said—In the framing of an inaugural address the initial difficulty often lies in the selection of a subject to enlarge upon. And with an architect who is expected to treat on a subject allied to architecture, and has to deliver his address to an architectural audience, this difficulty is realised to the fullest extent when he knows he must try and be original and interesting. But I must speak for myself, however, as my predecessors with apparent ease, and in a masterly way, not only fully interested us, but excited our admiration by the originality and eruditeness of their remarks, and I may say that, in following Mr. Pentland, it is with diffidence I inaugurate the session to-night, and I crave your indulgence, should I prove wearisome. Now, my troubles, developed



MR. G. P. SHERIDAN, A.R.I.B.A.

*Block kindly lent by the Irish Daily Independent.*

the more, I considered what best to address you on, and in my despair my thoughts turned to our Association, and so I determined to be somewhat personal and talk of ourselves and our work, letting reflections on other matters follow, even as my thoughts might lead. Having reviewed the work of the Association since it was founded, the lecturer proceeded—The success of the Association as an educational body depends on the individual volition of the members. If they wish it to succeed, no doubt it shall succeed. If they conscientiously try to participate in the advantages to be derived from the work and aims of the Association, they will benefit themselves and raise its status and representative character. Perhaps of all the classes, the sketching and measuring class is the most important. We all know sketching is inseparable from an architect's education—how it trains the eye in proportion and judgment, concentrates the attention on detail, and assists the mind in understanding and recording the effects produced in deceased architecture. My anxiety to impress on you the importance of participating in our Society's work resolves itself into a warning to the younger members to guard against any tendency towards retrogression; as likely we may be at a turning point in the life of the Association (and this must be my apology to my seniors and masters for dragging them over ground already

well traversed). After experiencing the first flush of enthusiasm, a reaction may set in, the earnestness cool off, and apathy take the place of worthy effort unless they are awakened to the advantages held out to them, and to the benefits to be derived from a system of architectural education—supplemental to office work—and well suited to assist in an effective training of the hand and mind. What are the advantages of this education I have been so constantly referring to? How does it influence an architect who has to earn his living by superintending the moulding into material form the creations of his fertile imagination? Well, there are, perhaps, many advantages, as for instance, expression and expertness in design—the power of knowledge—insight into the possibilities of further research, etc.; but an advantage I place above these and which these must lead up to is the development of a mental condition which seeks to investigate what architecture is and endeavours to understand why certain forms are beautiful and why varied emotions are excited in the contemplation of different buildings. In order that an architect might be able to create an architectural composition to give pleasure to those who shall behold his work, it is well he should have knowledge of some of the causes which influence appreciation. Architecture depends a great deal for its attribute of beauty in the manner in which it occupies space, and it is not dependent on ornamentation, and consequently I believe architectural beauty for the most part consists in the due proportion observable in the outline of a building and its several parts. Colour, to a certain extent, adds beauty to architectural works, but in order that it should do so, it must, I think, have the character of necessity and not of having been adopted for the sake of ornament alone—contrast a red brick building with one that is painted brick colour. The knowledge of the nature of materials and their adaptability to the uses for which they are employed also influences ideas of beauty. The history of architecture in its archæological sense is a history of the progress of man's knowledge of the use and nature of building materials. This is noticed in the gradual lengthening of the column in proportion to its thickness, which we observe in the Greek and Roman orders. And when experience taught what the arch in Gothic architecture could sustain, the span grew wider and wider until the Tudor arch was evolved. And the qualifications of the materials in any country to some extent explain the peculiar characteristics of its architecture. Again, I think, a building to be beautiful must give us the idea that it is able to withstand the injurious agencies of nature, which are always tending to destroy it. It should appear stable and not top-heavy, and that material which appears the most lasting to some extent affects the mental condition forming ideas of beauty. The emotion of the sublime may be excited by the size of the building. If of great height the feeling may be that of fear of the pile falling, but this feeling might be caused by a somewhat similar condition in nature as by a high perpendicular cliff. But the emotion of sublimity produced by buildings of architectural merit arises when we reflectively connect their existence to the mind that conceives them, and to the mental effort of guiding the progress of the work. The difficulty with which we know an architectural work to have been accomplished, perhaps, adds still more to the emotion of the sublime. A certain amount of recurrence of the same effect in a building gives us an idea of sublimity, because it suggests the whole edifice is the effect of one single conception in the architect's mind. Beauty in effect is added to a building when it expresses the uses for which it was erected. Each generation has not the same knowledge nor desires as the preceding one, and each age has its special footprints and its special character stamping the architecture of the period with the general aspirations of the community. We are always changing, always moving onward, and so architectural judgment is likewise influenced. In this very practical and material age the fine arts are considered as something apart, and not as an en-

bodiment of the public mind as in epochs past. And it is difficult to say in how far the work of to-day repeats architecturally the aspirations and characteristics of the times we live in. What is the dominant note to which modern architecture is attuned? What harmonies in modern life are carved and expressed to material shape? What new cult is attracting devotees and imperceptibly influencing the public mind? In this restless age, when the spirit of keen competition creates a feverish desire for change and novelty, it is very difficult to point in what direction the tendencies of to-day appear to be drifting. But, perhaps, I may not be far astray in suggesting that a "studied simplicity" is apparent in the motives of modern life. I think it can be traced through the different phases and conventionalities of our every-day existence. People assume a virtue if they have it not in the simplicity of manner and address, and decry the extravagances of a former generation. They will reject with affected disgust the ornate and massive, and display a ready preference for the opposite, though it borders on the crude. Great wall surfaces without any counterbalancing and contrasting features are thrust at us, or perhaps a strip of sculpture is crudely planted on which has no meaning in the unity of composition. Entablatures are distorted, and the parts perhaps interchanged in a way calculated to make you reflective, if not sad. Columns are attenuated and appear without a base, or are finished with a sickly mould in lieu of a cap; or, again, are distorted with an appalling entasis associated with an ill-used bolster, and perhaps are laden with rustications to such a pronounced effect as to present the appearance of a sacrificed salmon. Instances might be multiplied if time permitted. But I must not pass on without letting you understand my references are only in a general sense. Excellent work is done now, and which may well be said embodies the true and beautiful in a way which demands our admiration, and in which departures are made from proportions which for generations had been accepted as fundamental in good design, and in which originality is not defined so much by novelty as by a modified adaptation of precedent, carrying with it respect for that which has gone before. Simplicity, with the authors of these works, meant repose and unity, and restraint and truth. They introduced ornament where ornament spoke to you most, or omitted it where truth could best be expressed without it. These men are working up to high ideals. They make the sciences subservient to the principles of design and expression; they are not afraid to accept the advantages which science empowers them with, as they understand it is only knowledge which can be viewed and considered architecturally. They consulted the past for suggestion, and understood the feelings which moved the early architect, who, as Smiles, in his book on "Duty," says, "Put their spirit into their work; they put religion into their work. Their architecture had life, and truth and love and joy in it. It was chiselled music."

On the motion of Mr. R. Caulfield Orpen, seconded by Mr. R. M. Butler, a warm vote of thanks was passed to the chairman for his excellent address.

## CORRESPONDENCE.

### Rural District Councils.

*To the Editor of the Irish Builder.*

SIR,—Under the heading "Comments" and "Engineers for District Councils," in your last issue of the *Irish Builder*, you have opened up a question which is likely to interest many readers of your valuable journal.

I, for one, do not complain of the custom generally pursued by local bodies, in inviting Engineers and Architects to compete for certain positions, to discharge certain Engineering and Architectural duties in connection with the supply of water, gas, electric lighting, sanitary works, or works in connection with the Labourers' Acts; but what I do

object to, is inviting by advertisement, "Engineers, Architects, or *others*, or *parties* willing to undertake the duties of Engineer, &c., in the carrying out of such and such a scheme"—involving in many instances the expenditure of thousands of pounds.

We never see an advertisement to run thus:—"Persons wanted to undertake to discharge the duties of Medical Doctors." A Doctor is advertised for as a doctor, and none but properly qualified doctors need apply, or would think of applying for the position. The same applies to Solicitors, Apothecaries, and, as you remark, even to Pauper Nurses. This is as it should be. When an Architect or Engineer is advertised for, the term should imply a qualified practitioner—one who lives by his profession and by his profession only; but unfortunately it implies no such thing. The local "Carpenter," the local mason, or handy man, who has friends on the Council applies—he can do it cheap, and why saddle the rates to pay high fees to an outsider, very often a stranger. "Sure you know the poor rate-payers have to be considered," etc. An Engineer has no chance in competing under these circumstances with local men of the class referred to, and sometimes they are only invited to compete for the purpose of contrasting high fees with those of the local aspirant. Another gross abuse is the conferring of the title "Architect" or "Engineer" on such a man the moment he is elected by these worthies of the Rural District Council.

I consider the appeal to the Local Government Board a very proper one, and directing the attention of that governing body to such abuses is highly commendable.

The Irish Local Government Act gives extraordinary powers to the Local Government Board, and it is to be hoped that the abuses complained of will not be allowed to continue any longer, and that they will refuse to sanction the appointment of persons of this class elected by Rural Councils.

You pay a well-merited tribute to the new Chief Engineering Inspector, Mr. Cowan, a tribute which, I venture to say, will be endorsed by every member of the profession in Ireland, even by those who have not the pleasure of his acquaintance and who know him by repute only.

It would be well if Architects and Engineers all over the country would give particulars of local experience in their Districts, and afterwards combine and approach the Local Government Board on the subject.

See what the Local Government Board has done to raise the standard of Pauper Nursing in Union Workhouses all over the country in a short period, and if properly approached on the matter I have no doubt they would also raise the standard of professional practice in Engineering.

But what can be expected of such a body if the parties affected will not come forward to assert their rights?

Yours truly,

ONE OF THE AGGRIEVED.

### Still Made in England.

To the Editor of the Irish Builder.

SIR,

In reading the item of comments, "Still made in England," in your last issue, confirms me in the impression that your journal has entered upon a career of great usefulness, particularly to those who have at heart the encouragement of home-produced building material.

There is a wide field in this matter for inquiry and suggestion. Therefore it is to be hoped that those of your readers who know where the raw material is to be found, or who have used suitable goods produced in this country, will not hesitate to publish such, and in my opinion your columns are just the medium for information of this kind.

The Irish Builder offers to District Councils, and all Administrative Boards just that direct technical medium for advertising which they seek

For instance, is there no stone in Ireland to take the place of Portland? I don't say that we have as yet turned out stone of equal quality, but I do say that we have sand-stone equal to the Scotch. Mr. Editor, Glasgow is a long time there, and one would have a very prolonged search to find a bit of Portland stone in that City.

Then, as to slates, there is more, a great deal more, slate-yielding rock in Ireland than has as yet been tapped, and the slates now produced are quite equal to the imported article. I cannot help recording a case which came under my own notice to illustrate the apathy—the disregard—some Irish architects and their employers exhibit in this matter. Within the last two years, within ten miles of Dublin, there were two new churches being roofed at the same time—one a R. C., designed and superintended by a Dublin architect, and covered with English slates; the other a Presbyterian, designed and superintended by a firm of London architects, and covered with Irish slates.—I am, yours faithfully,

A TRAMP.



### A.A.I. JOTTINGS.

The Session opened on October 17th, with the President's Address, a report of which will be found in another column. Mr. Sheridan's paper was a gentle reminder to our members that Architectural education does not begin and end with the daily opening and closing of the office. He showed what an inexhaustible treasure there is in the wonderful history of our art for those who are willing to seek for and be guided by it.

The list of prize winners for the last session was read by the Hon. Sec. as follows:—A.A.I. Travelling Studentship, F. Core; Pupil's Prize, F. Morley; Construction Class, First Prize, F. Core; Second Prize, G. Strickland; Design Class, First Prize, F. Core; Second Prize, F. E. Sparrow; Sketching Prize, F. Core.

It will be seen that one name figures prominently in the list, and as the President said, it is to be hoped that other members will be encouraged by Mr. Core's success to work hard for the prizes offered next session.

The visit to the Richmond Hospital on October 21st resulted in a fair attendance of members. Both Mr. Carroll and Mr. Batchelor, the architects of the Hospital, were present. The plans and details of the work were ranged round the entrance porch and were fully described by Mr. Batchelor, who then guided the members over the building, and explained to them all the interesting features connected therewith. The systems of ventilation and heating, and the method adopted to obtain a sound-proof floor were clearly demonstrated. The most interesting feature of the Hospital, however, is the operating theatre which has been so designed as to fulfil the best possible antiseptic conditions. The air supply may be regulated

as to quantity, warmth, dryness, and cleanliness, by a system of heating appliances and screens beneath the theatre. The trouble taken by Mr. Batchelor to make the visit of great educational value, was highly appreciated by all the members present.

A programme for the Design Class has been arranged by the Secretary, Mr. E. Bradbury. The first meeting is to be held on Thursday, November 2nd, at 8 p.m. On that evening the President will introduce to the class the subject of Domestic Planning.

The Construction Class will meet on the following Thursday, November 9th, at the same hour, when Mr. McGloughlin will give instruction in "Brickwork." Mr. McGrath, the Class Secretary, has mapped out a very useful session for the junior members and it now rests with them to take advantage of it.

#### Important Dates for A.A.I. Members.

Thursday, Nov. 2nd.—Design Class, 22 Clare Street, 8 p.m., "Domestic Planning"—G. P. Sheridan.

Tuesday, Nov. 7th.—Ordinary Meeting, Grosvenor Hotel, 8 p.m., "Architectural Practice, 200 years ago"—T. E. Hudman. Illustrated by lantern slides.

Thursday, Nov. 9th.—Construction Class, 22 Clare Street, 8 p.m., "Brickwork"—A. J. McGloughlin.

Saturday, Nov. 11th.—Visit to alterations and additions at Franciscan Convent, Merchant Quay, 2'45 p.m.; also to St. Auden's Church.

Thursday, Nov. 16th.—Design Class, 22 Clare Street, 8 p.m., "Domestic Details"—F. G. Hicks.

"OCULUS."

## OUR LONDON LETTER.

**The Building Trade.**—With the enormous amount of building which has been and is still proceeding in all parts of the Metropolis some Architects and Builders have had as much as they could do to get through their work, and as there are signs of an increase rather than otherwise it is likely that the demand for labour will presently be considerably greater than the supply. Certain districts are being practically rebuilt or renovated, parts of Southampton Row and Bloomsbury are hardly recognisable, Leicester Square is changed, housebreakers as distinguished from burglars have been busy in the Strand, Whitehall, Fleet Street, and many other parts, and historic buildings long hidden have been temporarily revealed only to be again obscured by the builder. Government and L.C.C. schemes, new War Offices, street widenings, and other public works likely to come on in the near future, to say nothing of private building enterprise, will tax to the utmost the sources of the labour and material markets.

**The Surveyors' Institution.**—The members of this body are now rejoicing in the possession of a building specially designed for their use by Messrs. Alfred Waterhouse & Son, erected at a cost of something like £35,000, and containing every facility for their comfort and convenience, and for enabling them to still further extend the privileges of membership. The formal opening was made the occasion of a conversazione, when the whole of the premises were made use of, Mr. T. M. Rickman, F.S.A., the President, doing the honours.

**The Registration of Architects.**—The debate on this question which took place at the opening of the discussion section of the A.A. did not elicit any very new facts, which is perhaps hardly to be wondered at when one considers how thoroughly the question has been thrashed out periodically and particularly lately. Representatives of those interested in the movement were there as special visitors, and at the close, Mr. W. H. Seth-Smith, F.R.I.B.A.,

very ably summed up, mentioning incidentally that he was one of those who framed the Bill, and that the A.A. actually started the question some forty years ago.

As usual the opposition made much out of what one supporter characterised as the "Artistic bogey," and it was very noticeable that apparently none of the former had made themselves acquainted with the Bill, and merely took the easy and popular way of assuming a minority, and of insisting that that body must necessarily be in the wrong, a form of argument which is the last resource of an opposition aware of its own weakness.

**Some New Theatres.**—Six months ago the L.C.C. approved of plans for a proposed new theatre in Shaftesbury avenue on condition that the work should be commenced within that time, but this not having been complied with, notice has been received that the sanction has lapsed, though there will probably be no difficulty as to its renewal when the proprietors are desirous of commencing operations.

The new circus, to be known as "The London Hippodrome," at the junction of Cranbourne and Lisle streets, which is now rapidly approaching completion under the superintendence of Mr. Frank Matcham, is to be fitted with a moveable stage so that the building may be used as a regular theatre when required.

Wyndham's new theatre, which also contains some novel features, is now practically finished and will shortly be opened, while the new theatre at Rotherhithe by the same architect (Mr. W. R. Sprague), is already in use.

**Fire Prevention.**—That exceedingly well-organised and useful body, the British Fire Prevention Committee, have started their winter session with a series of experiments at their testing stations near Regent's Park, when a concrete floor, an iron safe, and some wooden doors were subjected to contact with fire for periods varying from one to two and a half hours, and the results recorded for reference. The moving spirit in these matters is Mr. E. O. Sachs, the well-known authority on theatres, who has made the prevention of fire his special study, and who formed the Committee, which numbers now some five or six hundred members, the management being under the control of an Executive Committee composed of men whose names are a guarantee for the efficiency of the tests, and it can be easily understood that they are inundated with requests from manufacturers and patentees for the use of the testing stations. The results of the various tests are published and tabulated, and can be obtained from time to time from the Offices in Waterloo Place, and they will be found eminently practical and useful.

**Thames Embankment Extension.**—By the adoption of an amended Scheme which has been approved by Government, the L.C.C. will effect a saving of about £50,000 in connection with the proposed embanking of the Thames from Victoria Tower Gardens to Lambeth Bridge, by altering the street line so as to bring it nearer the river than was at first proposed more land will be available for recoupment. The Commissioners will give up part of the Victoria Tower Gardens for the widening of Abingdon Street, and will ask Parliament to give up the sites of some houses for the same purpose on the L.C.C. completing their portion of the scheme, while the Vestry of St. Margaret's and St. John, Westminster, have consented to contribute £100,000 towards the scheme, provided that the cost shall fall upon the new area of Westminster as defined by the London Government Act, 1899, and that the land between the river and Millbank Street be laid out as a garden.

**The new organ** for the Clontarf Methodist Church, built by Mr. George Benson, of Manchester, was lately opened.

**A meeting** to consider the erection of a memorial tablet to the Rev. Father O'Neill, parish priest of Ballymacoda, was held in the Town Hall, Youghal.

# MARKET PRICES.

## OILS AND PAINTS.

		£	s.	d.	£	s.	d.
Colza Oil, English ..	per cwt.	1	4	6	—	—	—
Copperas ..	per ton	2	0	0	—	—	—
Lard Oil ..	per cwt.	1	9	0	—	—	—
Linseed Oil ..	"	1	2	2	—	—	—
Petroleum, American ..	per gal.	0	0	7	—	—	—
Do. Russian ..	"	0	0	5	5	8	—
Pitch ..	per barrel	0	8	0	0	8	6
Tallow, Town ..	per cwt.	1	4	0	1	5	0
Tar, Stockholm ..	per barrel	1	5	6	1	6	0
Turpentine ..	per cwt.	1	17	9	—	—	—
Glue ..	"	1	14	0	2	18	0
Lead, white, ground, carbonate ..	"	1	2	0	1	3	0
Do. red ..	"	0	18	1	1	3	0
Soda crystals ..	per ton	3	10	0	—	—	—
Shellac, orange ..	per cwt.	3	2	0	—	—	—
Pumice stone ..	"	0	8	9	—	—	—

## METALS.

Copper, sheet, strong ..	per ton	88	0	0	—	—	—
Iron, bar, Staffs. in London ..	"	8	10	0	9	0	0

## Iron Galvanised Corrugated

sheet ..	13	10	0	14	0
Lead, pig, Spanish ..	15	12	6	16	0

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60 Upper Sackville Street, Dublin.

## COMPETITIONS OPEN.

Design	Advertised by	Premium	Last date
Infectious Diseases Hospital, Bury ..	Corporation of Bury, Lancashire ..	£100, £50, and £25 ..	December 1st
Workhouse Infirmary, Leicester ..	Board of Guardians, Leicester ..	£100, £50, and £25 ..	" 1st

## CONTRACTS OPEN.

Work	For whom	Apply to	Last date
Stones and gravel; 4,300 tons of former, and 300 tons of latter.	Armagh Urban District Council ..	J. C. Boyle, C.E., Town Surveyor, Armagh ..	November 6th
Business Premises at Dundrum ..	Mr. M'Clafferty, Spirit Merchant, Dundrum, Co. Down ..	J. J. M'Donnell, M.R.I.A.I., Architect, 27 Chichester Street, Belfast ..	— — —

## TENDERS.

**Armagh.**—For building new offices at the Workhouse for the Guardians. Bright Bros., Portadown (accepted) £480 5s. 0d.

**Ballinaboy.**—For erection of a boundary wall, pier, and gates, and other work in connection with the extension of the Ballinaboy burial-ground. Mr. R. Evans, Engineer, 51 South Mall, Cork. J. F. Wood, Ballinassig, Kinsale, (accepted), £185 0s. 0d.

**Belfast.**—For laying water main, Knockbrocken (second section), for the City and District Water Commissioners. Mr. L. L. Macassey, C.E., Westminster and Belfast :—

Patterson and Son, Ltd. ....	£13,034 19 5	Laverty and Sons, Belfast* ..	£9,121 0 0
H. and J. Martin, Ltd. ....	10,734 0 3	J. Hemmingway ..	7,765 0 0
Fish and Lefann ..	10,298 0 0	*Accepted.	

For supply of about 200 tons each of whinstone setts, 9in. by 6in. by 4½in., for the Belfast Harbour Commissioners. Dufferin Stone Company, Belfast (accepted).

**Cloughglass.**—For the erection of three cottages, Londonderry. Mr. R. Eccles, Buchanan, Architect, Londonderry :—

McKee and Sons ..	£720 0 0	Humphrey Campbell ..	£525 0 0
Joseph Shannon ..	630 0 0	James A. Fulton, Fountain Street, Derry	
Robert Colhoun ..	527 0 0	(accepted) ..	430 0 0

**Cork.**—For additions to Fermoy House, Cork. Messrs. W. H. Hill and Son, Architects, 28 South Mall Cork. Dennis Creedon, Fermoy, £249 0s. 0d.

**Feeny.**—For building parochial house, Feeny Co. Derry, for Rev. J. Gribbon P.P. Mr. J. P. McGrath, C.E., 28 Carlisle Road, Derry, Architect. Quantities by Mr. J. Ferguson, London Street, Derry, Surveyor :—

Mc Caffrey, D., Strabane ..	£892 0 0
Callagher, J., and Sons, Moville ..	822 3 0
Gillespie, D., Londonderry ..	780 0 0
Campbell, H., Londonderry ..	730 0 0
Denny, J. Dungiven (accepted) ..	625 0 0

**Kinsale.**—For building a boundary wall, erecting piers and gates, and executing certain other work in connection with the extension of the Ballinaboy Burial Ground, for the Kinsale Rural District Council. Mr. R. Evans, C.E., 52 South Mall, Cork, Engineer. J. F. Wood, Ballinassig, Kinsale, £185 0s. 0d. (accepted). Note.—Only tender.

**Limerick.**—For erection of a labourers' shelter at Mount Kennett, for the Limerick Harbour Commissioners. P. Bourke, Carr Street, £168 10s. Note.—This was the only tender received, and the Commissioners decided to carry out the work by their own men.

**Londonderry.**—For building two dwelling-houses at Bishop Street, Londonderry for Mr. Thomas McCallion. Mr. James P. McGrath, 28, Carlisle Road, Derry, Architect. Maultsail, J. E. & Co., Rosemount (accepted) £420 0s. 0d.

For additions to Mr. Gallagher's premises, Waterloo Street (amended plans). Mr. J. P. McGrath, C.E., 28 Carlisle Road, Derry, Architect, Colham, R. Strand Road (accepted) £203 18s. 0d.

**Meath.**—For supplying two steam road-rollers (12 tons), with driver and flagman, accompanied by watering cart, with horse and driver, to be employed for one month in the neighbourhood of Navan and Ashbourne, for the Roads Committee of the Meath County Council. Mr. J. H. Moore, 63 Eccles Street, Dublin, County Surveyor. Grainger Bros., Hollywood, Belfast, £1 15s. per day (accepted).

**Mount Kennett.**—For erection of a labourers' shelter at Mount Kennett, Limerick. P. Bourke, £168 10s. 0d.

**Moville.**—For painting interior of Drung Chapel, Moville, for the Rev. James Harkin, C.C. Mr. James P. McGrath, C.E., 28 Carlisle Road Derry, Architect :—

C. Doherty, Moville ..	£68 0 0
P. Malley, Derry ..	65 0 0
J. Gallagher and Sons, Moville ..	49 0 0
J. Durnin, Derry (accepted) ..	35 10 0

**Sligo.**—For alterations, &c., to chapel and residence at workhouse, for the Guardians. Mr. W. F. Gilchrist, C.E., Wine street, Sligo :— Charles Conolly (accepted) .. £275 0 0 | George Kerr, Sligo .. £237 0 0

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**BREVITIES.**

**Drinking Fountains** and public conveniences will shortly be erected along the Dublin quays for the use of the workmen and labourers.

**The architect** of the Delvin Rural District Council, Mr. Nulty, has resigned his appointment.

**The road labourers** under the Dublin County Surveyor will get in future a permanent wage of 16s. per week.

**The Bray Urban Council** have elected Mr. W. McLellan as sanitary sub-officer at a salary of £52 per annum.

**Helen Faucit Memorial.**—It is interesting to note that the memorial monument to Helen Faucit (Lady Martin) just placed in the Llantysilio Church in the Vale of Llangollen is the work of Irish sculptors. Is described as a very fine piece of work from the design of J. H. Foley, the famous sculptor, who took the task in hand a year or two before his death, Lady Martin giving him special sittings. The memorial, which is executed in white marble by Mr. J. Hughes, a young Dublin sculptor of great promise, is in alto-relievo representing the great actress with a volume of Shakespeare in her hand and seated in an old English chair. At the lower part of the chair is a medallion of Shakespeare, and masks of tragedy and comedy occupy the upper corners of the entablature. The alto-relievo rests on a pedestal bearing an appropriate inscription.

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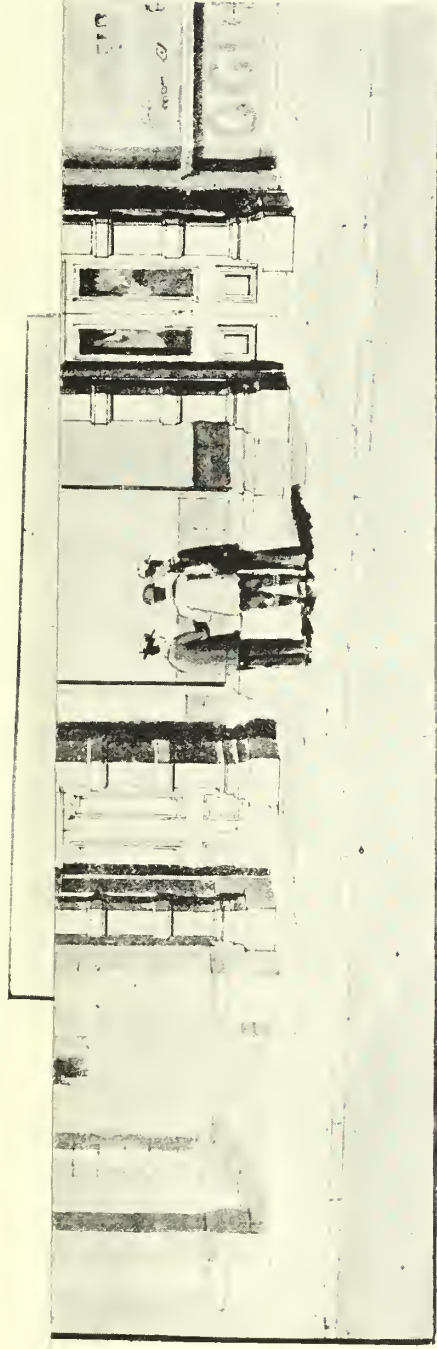
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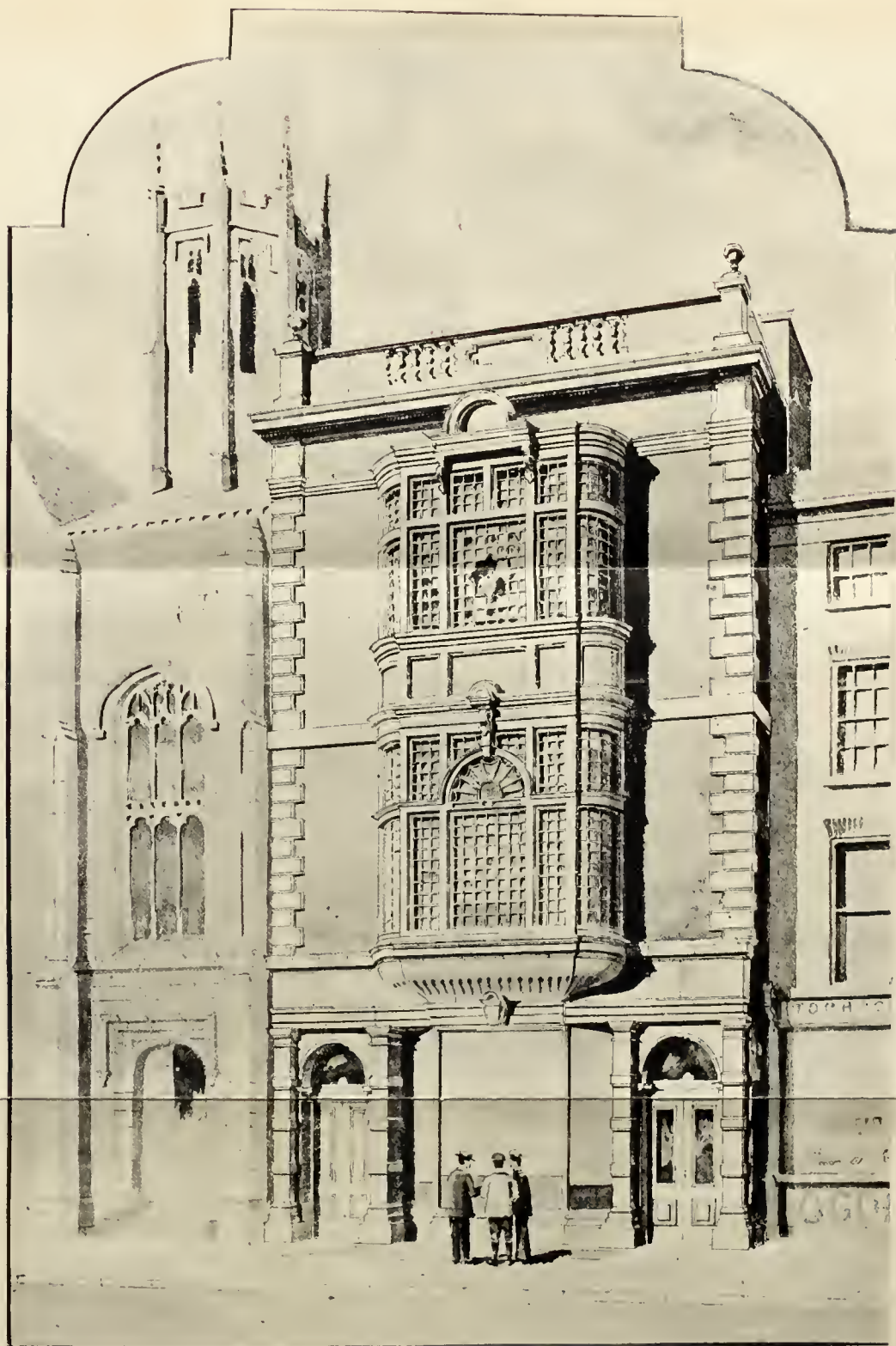
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# The Irish Builder

A JOURNAL DEVOTED TO

ARCHITECTURE, \* ARCHÆOLOGY, \* ENGINEERING, \* SANITATION,

ARTS AND HANDICRAFTS.

1st & 15th of the Month.

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## NOTICES.

The *Irish Builder* is published twice a Month, on the 1st and 15th, and may be ordered from any Newsagent, or direct from the Offices, - 13 Fleet Street, Dublin.

We have also established a London Office at 15 Montague Place, Russell Square, W.C., and all English, Scotch, and Welsh inquiries concerning copies of the paper and advertisements should be addressed there.

It is the only technical journal in Ireland, and reaches Architects, Engineers, County Surveyors, Builders, Contractors, Artisans, Council Officials, Members of Trades Associations, and Public Libraries throughout the country. A specimen copy will be sent post free to any address on application.

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### Editorial.

Literary matter and drawings to be addressed to the *Editor*, and must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. We do not hold ourselves responsible for the opinions of correspondents.

Notes of works (especially contemplated works), contracts, reports, &c., are always welcome. Drawings and photographs are particularly acceptable.

### Publishing.

All business communications to be addressed to the *Manager*. Advertisements must reach the office two days before the date of publication. The charge for Contracts, Notices, Prospectuses, Competitions, &c., is 6d. per line. Other advertisement rates can be had on application.

### Payments.

Cheques and Postal Orders to be made payable to The Proprietor, *Irish Builder*.

His Excellency, the Lord Lieutenant, has graciously intimated his intention of opening the Arts and Crafts Exhibition on Tuesday, the 21st inst.

## COMMENTS.

### District Council Appointments.

Once more we revert to the subject of engineers for District Councils as its importance must always ensure for it a leading place in our columns. That we were justified in our criticisms is borne out by the masterly manner in which our able and wide-awake contemporary, the "Surveyor," has taken up our remarks in its issue of 3rd inst. After referring to this "very real danger," and to the temptation on the part of local authorities, misled by a false and delusive economy, to appoint incompetent and untrained men as engineers and surveyors, it most truly states that "such a policy means that for every £1 saved in salary or fees, ten times the amount, or more, is ultimately lost through ignorant and incompetent work." This is apparent to everyone except Mr. Bumble. The "Surveyor" then quotes our comments, and gives the following sensible statements:—

"To our mind the true bearing of the question is this. There are two quarters in which responsibility lies for the evils to which we are referring. There is, of course, to begin with, the responsibility of the councillors; but, unhappily, their sense of responsibility often leaves so much to be desired that we are practically compelled to look for some external authority or influence which shall in turn be responsible for the councillors. The Central Government and the ratepayers are the only sources from which such authority or influence can come; but, unfortunately, in the case of the particular appointments to which we are referring the requisite pressure is not, as a rule, forthcoming. As our contemporary points out, satisfactory appointments are insisted upon by the Local Government Board in the case of certain officials, but not in the case of others. Surely the work done for local authorities by engineers and surveyors is as important in most respects as that of almost any other official. In one respect, indeed—we refer to expenditure—their work is by far the most important of any class of municipal officers, for, as we have frequently pointed out, they practically control the whole constructive side of municipal work. In spite of this, the powers that be are evidently of opinion that this is a matter in which local authorities should be given an entirely free hand. The only hope left to us, therefore, is in the ratepayers, and the only alternative is to endeavour to educate the ratepayers to an intelligent appreciation of what

their real interests are in a matter of this kind. In that work the Local Press, both in England and in Ireland, might conceivably exercise more effective influence than has hitherto been the case."

Our contemporary advocates that the aim should be to bring such cases down to the irreducible minimum, recognising how difficult it is to sweep away these abuses at once. We are also in entire agreement with the suggestion that all properly qualified engineers and surveyors in the service of Irish local authorities should join the ranks of the Incorporated Association of Municipal and County Engineers, which will certainly take up their grievances in a proper spirit and we think with more effect than our Irish institutions. We are glad to have the co-operation of so powerful a technical organ as the "Surveyor" in this far-reaching crusade, for it is only by being strongly united and organised that we can hope to achieve the result we so much desire.

#### Assistant County Surveyors.

On another page will be found a copy of a circular which has been sent round to County Surveyors for their observations as to the qualifications of Assistant County Surveyors. It will be seen that on the whole the tests are very fair, and in these days of examinations and diplomas it is right and proper in the interests of the Public Service, not to speak of the Assistant Surveyors themselves, that such qualifications should be applied and rigidly enforced in the future. The circular has naturally caused a flutter among those who now hold such appointments, and one has enquired whether two persons who have held for several years past the position of Assistant Surveyor, and who have been called upon, as a condition of retaining office, to pass an examination in engineering, or to accept another position, are entitled, if they refuse to adopt either course, to retain office, or, in case of dismissal, to obtain compensation as for abolition of office. We think that they are entitled to hold their positions on the same terms as of old—that they cannot be dismissed except for misconduct or incapacity, and that refusing to pass the proposed examination would not be misconduct or proof of incapacity. The provision by which Assistant Surveyors may be compelled to pass certain examinations applies only to future officers. The rights of existing officers are regulated by Section 115 of the Local Government Act.

Another correspondent has intimated that the same, or a similar, examination should apply to engineers for District Councils, a suggestion in which we fully concur.

Now, examinations for Assistant County Surveyors are an excellent idea, but what about pay? As a result of the Local Government Act County Surveyors have had their duties increased with, in most cases, a proportionate rise of salary. No doubt the work of the Assistant Surveyors has also been enlarged, but we have not observed that their pay has been materially raised. In the majority of cases it is only £80 or £100 per annum, with little or no allowance for travelling expenses. This is quite inadequate considering their qualifications (especially under the new *regime*) and tiresome duties, the latter being appreciated by many a County Surveyor and often referred to in his report to his Council. The higher officials are nominally supposed to be responsible if anything goes wrong, but our experience is that in the Public Service the subordinate is invariably made the scapegoat.

We should much like to hear further opinions on the foregoing points from the Assistant Surveyors, and those of them who read our journal will oblige us by mentioning it to their colleagues who do not, so that the matter may be fully ventilated. Our columns are always at their disposal.

#### Death of Sir Thomas Deane.

The sudden death of Sir Thomas Newenham Deane, B.H.A., on the 8th inst., at his office, 3 Upper Merrion St., Dublin, has come to us as a painful shock. He was the principal partner in the firm of Sir Thomas N. Deane and Son, the celebrated architects, and was in his 72nd year. Born

in Dundanion, Co. Cork, on 15th June, 1828, he was in the very first rank of his profession, and was architect for several magnificent public buildings. Sir Thomas was associated in the restoring of Christ Church Cathedral, and afterwards occupied the position of architect to the Cathedral authorities. In combination with his son he was architect for the new Science and Art Museum and National Library of Ireland Buildings, and on the occasion of the opening ceremony in 1890 was knighted by the Marquis of Zetland, then Lord Lieutenant of Ireland. But perhaps his brightest achievement in the architectural world was his winning the second place in the great competition for the Imperial Institute, against a carefully selected list of the foremost architects of the day. It was indeed honour to Ireland, and it was stated at the time that his design would doubtless have been chosen for first place but that it was on too grand a scale and too costly. In conjunction with his son, Mr. Thomas Manly Deane, B.A., he has carried out an innumerable number of buildings, mostly of a public character.

Amongst many other positions he held with great honour might be mentioned those of Curator of the National Monuments of Ireland and Ancient Monuments, under Sir John Lubbock's Act, and Lecturer in Architecture to the Science and Art Department in Dublin. He was a Royal Hibernian Academician, and a member of the Institution of Civil Engineers, Ireland.

Sir Thomas was undoubtedly the *doyen* of his profession in this country, and was most popular with all its members and with the Irish public, who were proud of his genius. A great master of his craft he built his heart into those sculptured stones, those

"New structures that inordinately glow,"

Subdued, brought back to harmony, made ripe

By many a relic of the archetype

Extant for wonder."

#### Cork Cattle Market.

The citizens of Cork are much exercised as to the condition of the Cattle Market, which is anything but creditable to a city which is the centre of agricultural Munster for the cattle trade, with its valuable breeding and shipping interests. Perched high upon the side of a steep hill, approachable only by tortuous and narrow passages, surrounded by a densely populated and insanitary locality, it is strange that the farmers, dealers, and others, have so long endured its apparent unsuitability and its dangerous situation, especially when there is more than one flat site to be had in the city. Among other suitable places mentioned are Cork Market grounds and Cork Park, the west end of the latter being easily convertible into a fine up-to-date cattle emporium. Much money has been sunk in unavailing efforts to improve the existing structure, but sooner or later a new building must be erected and it would be wiser to do so at once.

#### A Magnificent Fee.

The Cork Board of Guardians are to have their new sewers "overseen" by the City Engineer, as consulting engineer. Mr. Coakley is engineer to the former, and Mr. Cutler is the city representative. No doubt both of these gentlemen will make a good job of the workhouse drains, but on an expenditure of £2,000 Mr. Cutler should certainly get a better remuneration than the magnificent fee of £25. At least 2½ per cent. on the outlay should have been offered if the work is to be divided among two.

A fine specimen of ecclesiastical art was recently produced by the firm of P. J. Neill and Co., Dublin, in the very handsome high altar by the order of the Very Rev. P. Fitzsimons, P.P., in the newly-built Church at Kilmainham Wood, Co. Meath, according to plans prepared by Mr. W. H. Byrne, architect. It is of Caen stone, with shafts of selected onyx, and is executed in good style as to figure work and general ornamentation.

The *Irish Builder* offers to District Councils, and all Administrative Boards, that direct technical medium for advertising which they seek.

## IRISH PRESBYTERIAN CHURCH AT PARANTIJ, INDIA.

A year ago in all this Indian district of 2,500 square miles there was no Christian church, so the little community of the Irish Presbyterian Church stationed there decided to build one, the illustrations of which we think will interest our readers. Apart from two or three special gifts the whole structure only cost the astonishing small sum of £67, and even seats and lamps have been provided. The end windows, all of pierced stone, are particularly interesting, as they were carved by the Parantij stonemasons in imitation of the old buildings put up by the Mohammedan kings in Ahmedabad, and a few other places, several hundred years ago. Each window contains in the middle an emblem showing some name of Christ, such as the Bread of Life and the True Vine, the Good Shepherd and the Door with the Key of David, the Horn of Salvation, the Bright and Morning Star, and the Sun of Righteousness. We are indebted to the Editor of *Daybreak* for the kind loan of the blocks.

### BOOKS RECEIVED.

**A Treatise on Surveying.**—There are a good many manuals on Surveying, but few, if any, are so good as *A Treatise on Surveying*, compiled by Reginald E. Middleton, M.I.C.E., and Osbert Chadwick, M.I.C.E., and just issued by that leading firm of technical publishers, E. and F. N. Spon, 125 Strand London. The book appears to have been written primarily for Colonial surveyors, but of course it is of equal service to home surveyors whose qualifications are not necessarily so high. Indeed, we venture to predict that as a text-book it will supplant many others now in use, for the information is complete and thoroughly up to date. There are 162 illustrations, as well as numerous plates, and every modern instrument is described. The various chapters treat on Chain Surveying, Optics, Description and Adjustment of Instruments, Traverse Surveying, Minor Triangulation, Plane-table, and Levelling and Contouring. A most valuable part is the treatment of Astronomical determinations and Route surveys, which most works on surveying carefully omit. The mathematical portion is clear, and the book is one that no Engineer can really do without. The cost is only 10s. 6d.

**Chimney Design and Theory.**—This is the title of another high-class book which we have received from Messrs. Spon. The author is Mr. William Wallace Christie, who has had large experience of this kind of work, and the information he gives has been compiled from many sources, including personal experience. The contents treat of Theory of Chimney Draft, Chimney Formulae, Wind-pressure, Air Space in Grates, Materials, Steel Chimneys, Brick Chimneys, House Chimneys, Lighting Protection, and much useful general information. There are forty illustrations, some of them being photographic plates of chimneys as actually erected. The detail drawings are well figured, and all dimensions are given. We should have liked to see more information given about the curing of smoky chimneys, but no definite remedy is stated. Count Rumford, of firegrate fame, cured more than 500 chimneys that had been given up as incurable, and no doubt his services would be in as great demand to-day in spite of all the wonderful cowl now in the market. The price of this handy book is 12s. 6d.

**Electric Bells and Alarms.**—Messrs. Dawbarn and Ward, 6 Farringdon Avenue, London, E.C., have sent us an excellent little sixpenny book on *Electric Bells and Alarms*, by F. E. Powell, being No. 3 of their "Model Engineer" Series. The object in view is to provide the clearest possible practical information on the fitting-up of ordinary electric bells, and hence clear instructions are furnished as to what to avoid and what to do in fixing and connecting a bell, with some practical hints in dealing with faults and repairs. All the various parts are treated, such as Electric Bells, Batteries, Pushes, Switches, Circuits, Alarms, and Repairs. There are numerous engravings and drawings, and all those interested ought to send for the book.

**The Century Dictionary.**—The *Times* has undertaken the publication in England of the famous Century Dictionary, prepared by the Century Company of New York. It is encyclopedic in character and scope, and is richly illustrated, especially in architectural examples. This truly monumental work is complete in eight volumes, and has cost £200,000 to produce. It is indeed a vast enterprise, and contains worlds of information.

## CLASSIC DETAILS AND THEIR APPLICATION.

By G. A. T. MIDDLETON, A.R.I.B.A., M.S.A.  
Author of "House Drainage," "Surveying and Surveying Instruments," &c.  
*All Rights Reserved.*

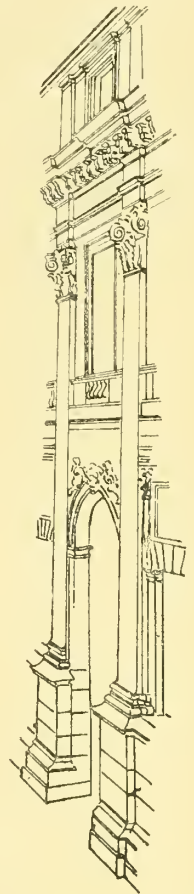
### VIII.—ITALIAN RENAISSANCE: BUILDINGS WITH SINGLE ATTACHED ORDERS.

Though Raffael, in his Pandolfini Palace at Florence, had adopted the usual Florentine system of treating the Palace as an order, without the use of many parts, such as the columns, of which the orders would in Classical times have been more strictly considered to consist, yet when he built the Caffarelli Palace at Rome, he employed one complete attached order. This marks a new departure, and is one of the distinguishing points of difference, generally speaking, between the works of Florence and of Rome. Certainly, the Farnese Palace, of which there will be more to say presently, is treated in the Florentine fashion externally; but, generally speaking, complete orders, either single or super-imposed, are used for the sake of ornament, attached to the outer walling, but without constructional function.

In the example under discussion—the Caffarelli Palace—the lower storey is heavily rusticated, with a plain band of stone to form its plinth, and another half-way up, inserted at the springing of the arch of the doorway, and still another, absolutely plain, but projecting rather more than those below, to act as string course, and separating the lower from the upper storey.

The cornice is not so deep as usual in comparison with the height of the whole building; and it will now be seen that, instead of proportioning it to the building as a whole, as had hitherto been the rule, Raffael had rather proportioned it to the Doric columns of the upper storey, to which it more immediately belonged. With these columns, too, he took considerable liberties, both in proportion and detail, as compared with the work of the Romans, upon which all the Renaissance was founded. They are tall and slender, and are placed in pairs close together, with a considerable distance between the pairs and each pair resting upon a surbase. The effect is perfectly harmonious, and allows for the introduction of windows, thus in every way carrying out the ideas of the Italian architects as to the employment of the forms of the more ancient architecture of Italy, to meet the needs of the buildings which they were called upon to erect; and it is characterised, as all the best work is, by extreme restraint, and the employment of the least possible ornament, to satisfy the needs of the case. The only carving upon the front of the Caffarelli Palace is the small mask on the corner, where there is usually to be found the coat of arms of the owner.

A reference to the details will show upon comparison considerable difference between the treatment of the mouldings by the Romans and by their successors of the

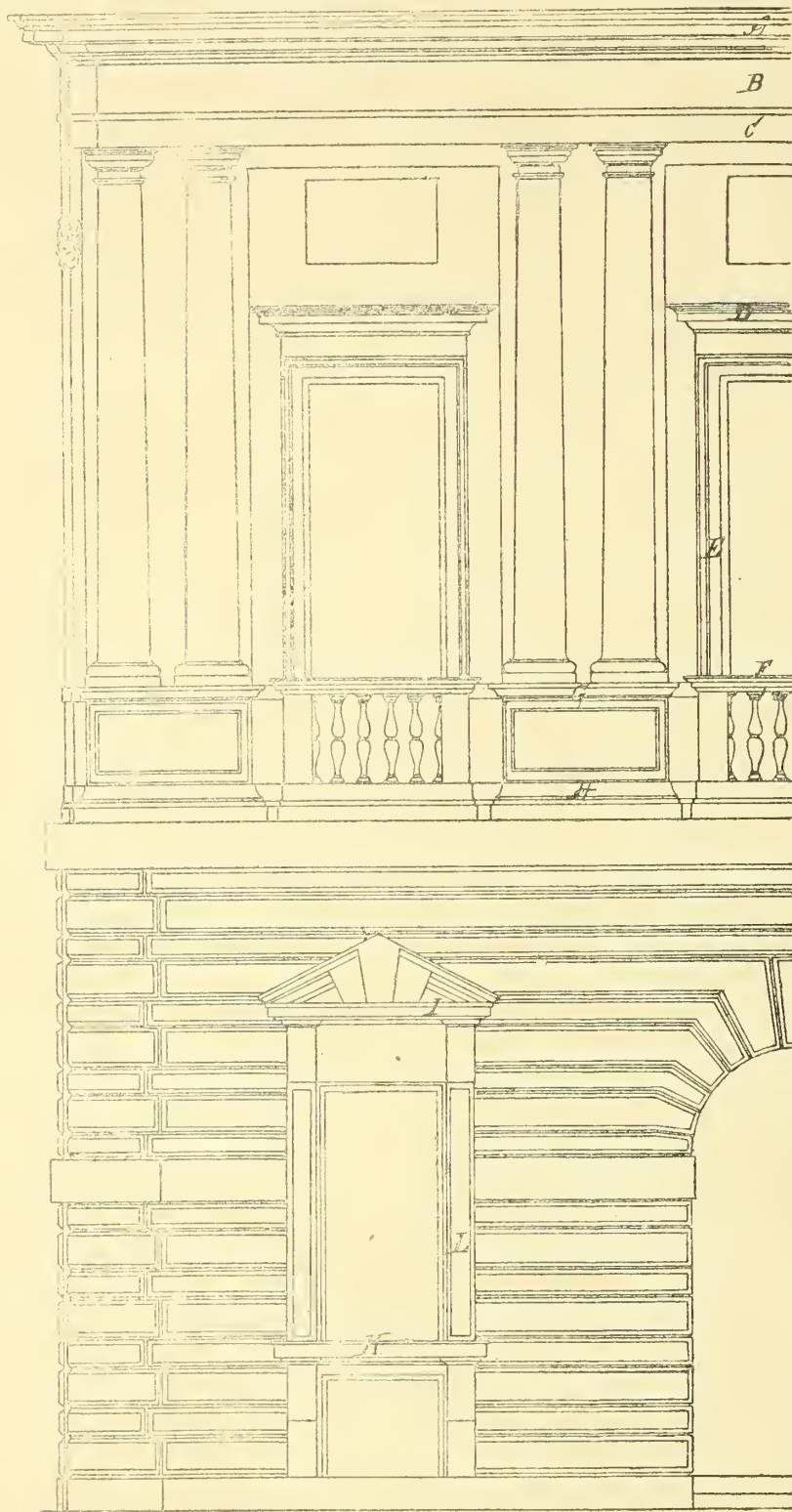


Palazzo Valmarana Vicenza—Andrea Palladio (From Schlitz.)

Renaissance. There is the same use of the circle and its segments, but with considerably greater freedom and a higher appreciation of the exact part which each moulding is to play. Each one seems to have been most carefully thought out, having regard to its position, above, level with, or below the eye; and particular attention may be directed to the frequent use of the cavetto, and to the very different curves which are given, both to the cyma recta and to the cyma reversa, wherever they are used as in mouldings A and D.

The employment of single attached orders is generally considered rather a sign of Venetian than of Roman work, and correctly so. Single orders were there introduced by

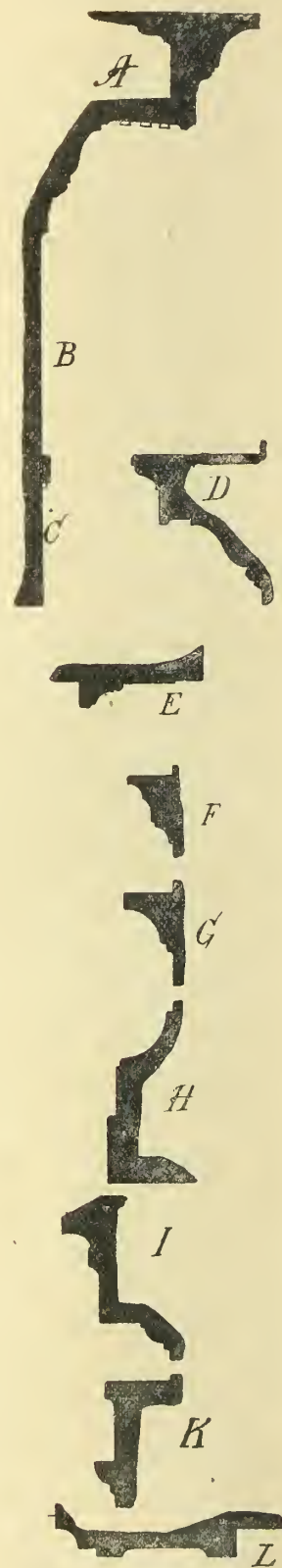
Palladio, and greatly used both by him and his successors, often comprising the entire height of a building, and including several stories. This carries off the cornice well as proportioned to the whole building, for at the same time it is proportioned to the attached order; but the separation of the stories is, of course, not so well marked, and a vertical tendency of the general lines becomes prominent to an extent which is not usual in architecture of the Classic type. In the Valmarana Palace, at Vicenza, which may be considered to be fairly typical, tall Corinthian pilasters rest upon a deep plinth, and are continued through the two lower stories of the building. They carry the main cornice,



*Elevation*

*Plan at 1<sup>st</sup> Floor level.*

Caffarelli Palace, at Rome. (By Raffael.)

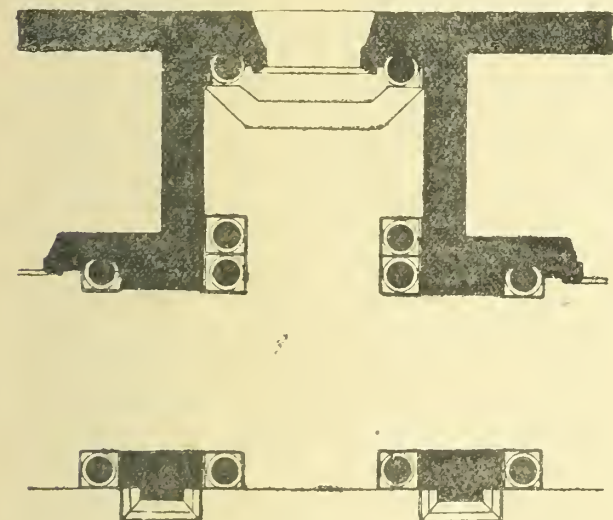
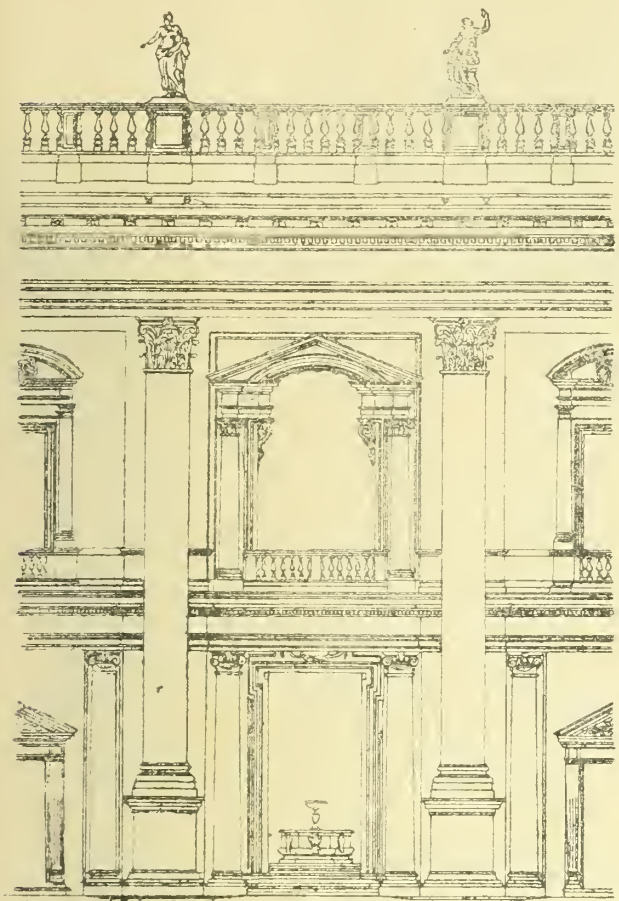


Mouldings from the Caffarelli Palace  
Rome. (By Raffael.)

which, though rich, is plain compared with the Corinthian cornices of the Romans, and is destitute of carving. Above this, however, in this instance, there is a third, or attic,

a poor substitute for the continuous plinth. The rich effect, however, of the constructional Ionic order to the lower storey, carrying the intermediate cornice, which the main pilaster interrupts in crossing, is a point well worth attention, and a detail of the pilaster capital is appended for comparison with the capital of the Pantheon, illustrated on page 112 of the *Irish Builder* for September 1st last, in order to show how closely in such respects the Renaissance architects followed their models of earlier times.

(To be continued.)



Courtyard of the Conservatori Palace, in Campidoglio, Rome.  
(By Michael Angelo.)

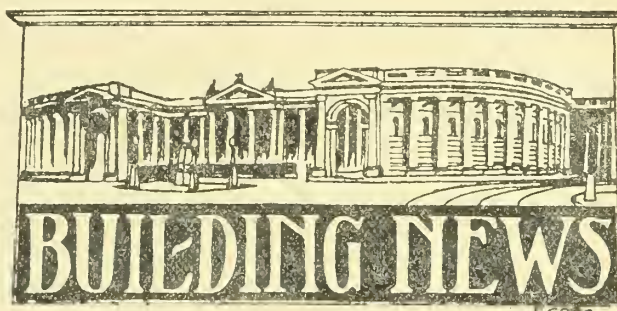
storey; but the building would have been complete as an architectural composition without it.

A very similar method of treatment had been attempted by Michael Angelo in the Courtyard of the Conservatori Palace, in the Campidoglio, Rome; but the Corinthian



Detail of Capital, Conservatori Palace, Rome.

pilasters there hardly give the effect of carrying the cornice, and the result is by no means so good as it generally is in the work of Palladio and his followers. Analysis of the cause shows the pilasters to be too widely spaced—too weak for the task imposed upon them—and the pedestals upon which they rest are but



**Ballycastle.**—A scheme for labourers' cottages will shortly be started at Ballycastle, county Antrim.

**Belfast.**—Among the many big edifices which are on foot to be erected in Belfast is a large block of buildings for the Ocean Accident and Insurance Company. These will be at the corner of Donegall Square East, and Chichester Street, and in elegance and size will rival the Scottish Provident Buildings recently opened on the other side of the Square.

**Carrick-on-Shannon.**—The Carrick-on-Shannon No. 1 Rural District Council have prepared an improvement scheme in pursuance of the Labourers' (Ireland) Acts, 1883 to 1896. The sections of the Rural Districts to which the scheme relates consists of the Electoral Divisions of Annaduff, Barnameenagh, Carrick-on-Shannon, Drumshanbe, Drumsna, Keshcarrigan, and Leitrim, and the estimated cost is £3,840. A copy of the scheme can be had from Mr. A. O'Connor, Clerk of District Council.

**Drogheda.**—At a meeting of the Drogheda Harbour Board an application was received from the Steam Packet Company requesting additional shedding accommodation to be erected for the convenience of the traders of the port. The existing structures were built by the Commissioners, and their use granted to the Steam Packet Company free of charge, and having regard to the fact that in other ports substantial rents have to be paid for such sheds, some of the Board think that the Steam Packet Company, at its own expense, should provide shedding accommodation for the convenience of its customers. On the other hand, it must be recollected that were it not for the local steamers trading between this and Liverpool the revenue of the Commissioners would be comparatively small, and every possible encouragement should be given to foster an industry that gives a good deal of employment in the town. This was the view expressed by several members of the Board, and eventually, after considerable discussion, a deputation was appointed to wait upon the Steam Packet Company to get full information as to what is required.

Drogheda should be shortly able to boast of a Free Library, for at a meeting of the Town Council on Wednesday last Mr. Chas. McCann was appointed to collect the Free Library rate of 1d. in the pound at a remuneration of 6d. in the pound. It has not, so far as the public are aware, been yet decided where the Library shall be situated, but we suppose this is one of the avails which will shortly be announced by "our City Fathers."

**Dublin.**—The Dublin Central Mission of the Methodist Church have secured a suitable site at Dolphin's Barn for a new church and schools.

A branch of the Hibernian Bank has been opened in Dorset Street. Mr. O'Toole, Dublin, was the contractor.

Tenders are being called by the Board of Public Works for carrying out certain alterations to the Ground Floor of the General Post Office, Dublin. Plans and specifications can be seen at the office of Public Works, Custom House, Dublin.

At a sanitary conference, held at the Public Health Office, Cork Hill, a committee was formed to prepare a scheme for establishing an isolation hospital for Dublin.

The Markets Committee have invited tenders for the painting of the iron work and wood work at the Fruit and Vegetable Market, East Arran Street. The City Architect has prepared the specification for the work.

Within the last few weeks great improvements have been effected in the floor of the central hall at the City Hall, Cork Hill. The worn-out Portland stone pavement has been removed, and a concrete bed laid down, upon which has been fixed a marble and mosaic floor. The centrepiece is composed of ceramic tile mosaic, in which the ancient coat of arms of Dublin has been introduced. Outside this the floor is of marble, composed of black and green rings of Connemara marble interlaced with Cork red. The filling is made of Sicilian marble octagons with black marble squares, and bordered with rings of tile mosaic. The border outside the columns is of green circles, and in front there is Cork red filling, with Sicilian plinths in remainder of circle. The panels between the pillars are of black borders with green filling, and the remainder of the floor next the walls is of square Sicilian marble slabs. The panels of the principal doorways are filled with Sicilian octagons and black marble squares, and the front entrance-hall is of similar filling of marble as the main hall. The portico is laid with Portland stone octagons with black dots sufficiently thick to stand the traffic, and which is in keeping with the stone in the building. With the exception of the Sicilian work, all the marble has been quarried in Ireland. The contractors are Messrs. H. Sibthorpe and Son, Molesworth Street, Dublin. The designs were prepared by Mr. C. J. McCarthy, City Architect, under whose supervision the work has been carried out. Mr. P. Bride was the clerk of works.

The northern side of Dublin has hitherto been without any Fire Brigade Station, and when outbreaks occurred in that quarter difficulty was often experienced in communicating with Chatham Street by telephone or car, great damage being frequently done before the arrival of the Brigade. The Corporation some time since took steps to remedy this grave defect, and having at their disposal a suitable site in Lower Buckingham Street, they promptly set about the construction of a Fire Brigade Station. The contract was given some time since to Messrs. J. Pemberton and Son, Builders, Charlemont Street, who have just completed the erection of the new Municipal Library at Charleville Mall and Dunne Street in a very complete manner, and the works of the new Fire Brigade Station are at present very far advanced. The site is an especially central one for a wide district on the Northern side, and its usefulness in cases of outbreaks of fire on that side of the river will be readily understood. The structure, which has attained a high level, will, when completed, be both ornamental and imposing. Ample space is provided for the accommodation of all the carriage and other equipments of a first-class brigade, quite equal to anything to be found in connection with the very perfect system existing on the Southern side, and the stabling to be provided for horses, in which they will be fully harnessed night and day, so as to be ready to turn out at a moment's notice, will be more than equal to requirements. The frontage of the new station, which extends for a considerable length along Lower Buckingham Street, is of red Portmarnock brick, and the dressings are of stone of a very durable character. The station, it is expected, will be finished by January next.

In the Hibernian Hotel, Dawson Street, a public meeting was held for the purpose of transacting the general business in connection with the new Hospital for Skin Diseases which

is to be opened in Beresford Place in the course of a week or so. There is no hospital in Dublin specially devoted to the treatment of diseases of the skin, and that being so, the new institution should commend itself to the support of the philanthropic public. The Hospital is to be conducted on strictly non-sectarian lines, and the medical staff are to be honorary.

New bank buildings are being completed in Dublin, facing the Rotunda in Cavendish Row, at the junction of Cavendish Row and Great Britain Street. They occupy the site of the "rents" erected a century since by William Ralphson, who endeavoured to introduce into Dublin the system of dwelling in flats. The new bank has been erected by Messrs. Dockrell and Sons, Builders, of Dublin.

Housing of the Working Classes.—At a meeting of the Committee of the Whole House held in the Council Chamber, City Hall, called by Alderman Farrell, for the purpose of considering the resolution which, on his motion, had received the unanimous approval of the Corporation.

After a protracted discussion the following order was made, on the motion of Alderman Farrell:—

Resolved—That we hereby instruct the Town Clerk to obtain from six of the largest English and Scotch towns all information bearing on their housing schemes and their housing legislation, and that he prepare and submit a comprehensive report to this Committee on this day four weeks bearing on the matter, together with a statement showing what powers this Council possesses, and indicating the best and most expeditious means of obtaining greater powers for acquiring vacant land and slum property at a reasonable cost, and for compelling owners and tenants to keep their dwellings in a sanitary condition; also with regard to the registration of tenement houses.

Dundalk.—The rejection by the Local Government Board of the Urban Council's financial scheme is not, of course, final or absolute, though it delays matters and means the reduction of the house-building scheme originally planned. Here are the items the Council applied for:—

(a) For erecting Working Class Lodging Houses...	£17206 17 0
(b) For works at the Town Hall...	800 0 0
(c) For purchase and alteration of building for a Free Library...	1400 0 0
(d) For the erection of Eight Stalls behind Town Hall...	500 0 0
(e) For the erection of Six Stalls at side of Town Hall...	150 0 0
(f) For the purchase of a Fire Escape and Appliances...	130 0 0

To begin with, the total of these loans—£20,186 17s.—is far in excess of the present borrowing powers of the Board which are set down by the Local Government Board at only £13,029 9s. 4d. The Local Government Board require the Council to reserve £3,500 for laying a new water main, bringing the total amount which they will be prepared to sanction down to £8,659.

Of the items applied for by the Council, the Local Government Board totally refuse to advance £800 asked for refitting the Town Hall, and £500 already spent on the sheds at the rear—the former on the ground that the public money should not be spent on fitting up a concert hall or theatre: the latter on the ground that the £500 has already been expended, and the payment passed by the auditor.

As to the housing scheme, we are sorry that it cannot be carried out in its entirety—at present; but at least partial relief for the present evils of overcrowded and unsanitary inhabited areas, can be provided; and the rest will follow in due course if the first part of the scheme works well—as we have perfect confidence it will. The Local Government Board suggest that the Seatown scheme should be completed first, and urge the cost of preparing sites and making roadways, sewerage, etc., as against a partial carrying out of the three schemes. However, we think the resolution of the Council to build all the one-storey dwellings, as originally contemplated, on each of the three sites, leaving two

storey houses to follow—is a better idea. Even though there be a little extra cost in making the roadways for all, this expenditure will be compensated for by providing in each of three wards some of the housing accommodation so badly wanted in all. It is right that the cheaper form of house should be put up at once, so as to make it possible to deal with the condemned areas. The sooner the narrow, filthy lanes and alleys are closed up for ever the better for the health of the townspeople in general and of the denizens of these places in particular. No time will, we trust, be lost in preparing a new scheme and carrying it through.

**Dundrum.**—Tenders have been received for new steam laundry buildings at the Central Criminal Lunatic Asylum, Dundrum, Co. Dublin. The plans and specifications have been prepared at the Office of Public Works, Dublin.

**Edenderry.**—The Edenderry No. 2 Rural District Council have prepared an improvement scheme in pursuance of the Labourers' (Ireland) Acts, 1883 to 1896. The sections of the District to which the scheme relates consist of the Electoral Divisions of Ballynadrummy, Cadamstown, Carbury, Cloncurry, Dunfeirih, Killinthomas, Kilpatrick, Kilreany, Thomastown, and Windmill Cross, and the estimated cost is £3,021.

**Letterkenny.**—Alterations and additions are about to be made to Creeve House, Letterkenny, for Mr. David Leitch, according to plans and specification prepared by Mr. John M'Intyre, Architect, Letterkenny.

A new shirt factory is being erected in Letterkenny for Messrs M'Intyre, Hogg, Marsh, and Co., of Londonderry. The roof glazing is Helliwell's patent "Perfection" system. The building will be heated by Messrs. Musgrave's small bore pipes. The architect is Mr. M. A. Robinson, M.R.I.A.I., C.E., Richmond Street, Londonderry, and the work is being executed by Mr. Robert Colhoun, of Londonderry.

The new Roman Catholic Cathedral in Letterkenny is rapidly approaching completion, and promises to be a very handsome structure.

**Listowel.**—At a special meeting Mr. T. O'Connell, J.P., Chairman, presided. The clerk mentioned that the number of houses to be built under the new scheme was 220, each having an acre of land attached. In the case of an addition of 329 plots there were 249 cases where the plots were to consist of half an acre each, and in 80 cases of an acre. The scheme was estimated to cost £36,975. In the Rural District of Listowel there were 249 cottages which have already cost £29,710, with balances amounting to £870 due to contractors. The scheme was agreed to unanimously.

**Londonderry.**—Mr. P. C. Cavan, B. Sc., M.I.C.E., Chief Engineering Inspector to the Local Government Board, held an inquiry in the Guildhall on an application of the Londonderry Corporation for loans amounting in the aggregate to £1,870, for various improvements in the city. Mr. Alger, City Accountant, was examined as to the financial position of the city. Mr. W. J. Robinson, M.I.C.E., City Surveyor, gave particulars of the several works and explained the plans.

The citizens of Londonderry will soon be in the enjoyment of a beautiful public park in which to spend their leisure hours. Last session a Bill was passed in Parliament enabling the Brocke Trustees to buy the grounds of Gwyn's Institution, it being their intention to lay out and equip them as a public park and then to hand it over to the Corporation for the benefit of the citizens. The plans have been prepared by Mr. M. A. Robinson, C.E., M.R.I.A.I., of Richmond Street, Londonderry, and tenders for the walls and railings are now under consideration.

Extensive alterations are being made to the drapery premises of Messrs. Austin and Co. in The Diamond; and new premises are also in course of erection for the Misses Hegarty from designs by Mr. A. Forman, Castle Street, Londonderry.

The Ebrington Presbyterian Church Lecture Hall is almost completed and will be opened early in November. The plans were prepared by the late Mr. W. Barker, and the building has been erected under the direction of his successor, Mr. M. A. Robinson, M.R.I.A.I., the contractor being Mr. Robert Colhoun, Strand Road, Londonderry.

**Moynalvey.**—At Moynalvey, in Meath, the Most Rev. Dr. Gaffney, Roman Catholic Bishop of Meath, laid the corner-stone of a new church. The building is Romanesque in style, and will, when completed, comprise nave, sanctuary, and sacristy, with heating chamber. The nave is 80ft. long by 28ft. in width, the sanctuary 20ft. long by 20ft. wide, the sacristy 14ft. by 30ft.

**Tralee.**—Very Rev. Canon O'Riordan, P.P., Cahir-civeen, has taken up with the greatest activity the work which his predecessor in the parish, Canon Brosnan, started and persevered at until his death—the erection of the O'Connell Memorial Church. Practically, all that is now required is the roofing, the flooring, and internal fitting of the church. The main walls and ornamental stonework are all but finished. The architecture is of an elaborate description, and the church in its majestic proportions will be worthy, when finished, to rank amongst the most beautiful edifices in Rome itself. A pathetic incident in connection with the movement for the building of the church is supplied in the fact that for some time the work had come to a standstill owing to some difficulty with the contractor, and hardly had the obstacles been removed for the resumption of the work when Canon Brosnan—the object of whose life was the completion of the church—passed away. The sum of £12,000 is yet required to complete the edifice.

## APPOINTMENT OF ASSISTANT COUNTY SURVEYORS.

### QUALIFICATIONS.

Every candidate must produce evidence that his health and character are good, and that except in case of an Assistant County Surveyor, that at the date of his appointment he is not less than 20 years or more than 40 years.

- A.—A candidate (a) who has a diploma or degree in Engineering from a University or College of Science, or a certificate from the Civil Service Commissioners, that he is qualified to act as Deputy for a Co. Surveyor;
- (b) or, who is an Associate Member of the Institute of Civil Engineers of London;
- or who is an Associate Member of the Institute of Civil Engineers of Dublin;
- (c) or, who is an existing Assistant County Surveyor in a County, shall be deemed to be qualified without further examination.

A candidate who is not qualified under A must produce evidence that he has profited in one of two ways.

- 1st. By service with a County Surveyor, Civil Engineer, or Builder for not less than two years.
- 2nd. By attendance at a School of Engineering or College of Science for not less than one year, and being employed at practical work in connection with Engineering or Building for one year.

He must also pass a qualifying examination in the following subjects:—

1. Writing, Composition and Orthography ...	100	marks
2. Arithmetic and Mensuration ...	200	"
3. Freehand and simple Architectural or Engineering drawing ...	100	"
4. Building Construction, including small Bridges and sanitary works, and writing specifications ...	200	"
5. Construction and maintenance of Roads, footpaths and streets, including estimates ...	200	"
6. Chain Surveying and use of Dumpy level...	200	"
Total ...	1,000	"



**Armagh.**—The Urban District Council have called for tenders for the supply of 1,000 tons whinstone, 1,500 tons blue limestone, 1,500 tons grey limestone, 300 tons slate-stone and 300 tons gravel, all broken to 2in. gauge. Mr. J. C. Boyle, C.E., is the town surveyor.

**Ballycastle.**—An engineer is about to be appointed by the Guardians. Sewerage and water schemes for Ballycastle and Cushendall are set down for consideration. The Local Government Board have decided that sanitary expenses were union charges.

**Barnaculla.**—The Rathdown No. 1 Rural District Council are about to construct a reservoir, 30ft. long, 20ft. wide, and 6ft. deep, at Barnaculla; also to lay down a 4in. main, and to erect four fountains.

**Belfast.**—A joint meeting of the Improvement and Electric Committees was held, with Councillor Robert Thompson in the chair. Tenders were opened and considered for the supply of steel tramway rails to be used in the construction of the following lines:—(a) Tramway in Newtownards Road, from Short Strand to near Albertbridge Road; (b) tramway in Upper Newtownards Road, from Holywood Arches to Knock Road; (c) tramway in Ravenhill Road, from Albertbridge Road to South Parade; (d) tramway in Howard Street, College Street South, Grosvenor Street, and Springfield Road, from Bedford Street to near Springfield Factory; (e) tramway in Cliftonville Road, from Duncairn Street to near the Cliftonville Recreation Ground; (f) tramway in Stranmillis Road, from University Road to near Mount Pleasant; (g) tramway in Lisburn Road, from Malone Park to city boundary; (h) tramway in University or Malone Road, from near Stranmillis Road to Malone Park. The tender of Messrs. Dick, Kerr, and Company, of London and Kilmarnock, was accepted. The Committee recommend that the Corporation should do all the platelaying, paving, and concreting, and the laying of the rails. We understand there is a diversity of opinion upon this point, some members of the Corporation holding that the work should be executed by contract. It may be added that the value of the contract for rails is roughly estimated at £20,000.

**Drogheda.**—The work of concreting the footpaths still goes on though the bond which the contractor guarantees his work for twenty years has not yet been perfected. One of the sureties was dilatory about signing it, considering that a guarantee for twenty years was rather long, and a new bond will have to be prepared by the Corporation Solicitor, and a new surety found by the contractor.

At a meeting of the Harbour Board Mr. Roche sent in the following report:—

"I beg to submit a short report on the dredging done within the past season, which included twenty-one weeks' work, viz., from May 16th to October 8th. 28,820 tons were dredged and discharged at sea in one hundred and twenty-one trips, at a cost of a fraction over 3½d. per ton, calculated as follows:—Coal for tug and dredger, £189 13s.; waste, £4; wages, £252. The entire season's operations were at the Crook. The cutting at this point has widened the river sixty yards, for a distance of two hundred and fifty yards. I observed in one of my weekly reports, and I repeat it now, that the greater part of that time the stuff was difficult to dredge, and very severe on the machinery; yet everything worked satisfactorily throughout,

as there were only three days lost from start to finish through a breakdown of the plant."

**Dublin.**—At a meeting of the Port and Docks Board, the engineer submitted a report dealing with the old dock bridge, which he pointed out was entirely too antiquated a structure. He recommended the construction of a new bridge. The cost would be about £10,000. Even if repaired, the existing bridge, which was erected in 1821, would be a slow-working bridge, and an obstruction to the traffic. He gave plans of the new bridge.

Alderman Meade proposed that the Board approve of the engineer's plan for the new bridge, and that advertisements for estimates be issued. The present bridge was a disgrace.

Mr. Field, M.P., seconded the motion, and it was passed.

Alderman Meade also complained about the condition of the bridge over the canal, and the engineer was instructed to report to the next meeting what steps he considered necessary for its improvement, or if he thought a new bridge would be required.

It was further agreed that the Board should ascertain from the London and North Western and Midland Railway Companies what assistance they would be prepared to give the Board in carrying out whatever scheme may be decided on.

**Dundalk.**—Mr. Gaskin, C.E., Town Surveyor, recently reported as follows:—

"The extension of 3-inch water main on Avenue Road is now almost complete. Your works continue in grand working order. I have a man examining and cleansing all the valves and hydrants in town. They were last cleansed and reported on on 5th ult. I require a couple of fountains, and ask instructions as to obtaining same.

As directed, I now lay on table the plans of proposed drainage of Gallowshill. I am still continuing darning of roads. Footpath from Wellington Place to end of same at Vicarage wall is now complete, new kerbing and concrete flags have been laid the entire distance. I have commenced laying kerbing on west side of Big Bridge, as directed."

The enterprise of the Great Northern Railway Company in providing a specially-built and equipped saloon carriage for the convenience of football parties is warmly to be commended. The carriage, which was built at the Company's works at Dundalk, is at present lying at the Belfast terminus of the line, and consists of two compartments, one of which contains good lavatory accommodation where players after a match may obtain a wash down, while there is ample room for their clothes. The whole carriage is lighted by electricity and specially heated. The new venture will be of great utility in inducing clubs to travel oftener, and thus popularize the game in country districts.

**Kilrush.**—In a *Dublin Gazette* notice it is given that an application will be made by Mr. Hector S. Vandeleur to authorise and empower him to make a pier or quay at Kilrush, by a junction with the south-west end of the present Merchant's Quay, also to excavate, deepen, and dredge the side of the creek at the intended works, and at the existing pier or quay.

**Limerick.**—It is stated that legal objection is about to be lodged to the proceedings at the Limerick Borough Council relative to the procedure adopted at the passing of the resolution in favour of the introduction of the electric tramway scheme into the city.

**Londonderry.**—At a meeting of the Lighting Committee of the Londonderry Corporation—the Mayor (Alderman M'Learn, J.P.) presiding—a further letter was received from the British Thomson-Houston Company, Limited, of London, in reference to the electric lighting of Londonderry. Mr. Christie, Glasgow, consulting electrician to the Londonderry Corporation, also reported on the same subject. The company, in criticising Mr. Christie's former report, stated that with regard to the price of supply Mr. Christie proposed to charge only 6d. and 2d. for lighting, which under the most favourable circumstances would only give an

average price of more than 4d. per unit. They annexed a table showing the prices which were obtained for private lighting in towns in the United Kingdom with a population under 100,000, and which were making a commercial success of their electricity works. From these it would be seen that 4d. per unit was considerably less than that charged in any other town except Southport, which was a place exceptionally circumstanced on account of its summer season. They could not quite understand why Londonderry should be considered able to do so much better than Chester, where the figure was 4.9d. per unit, or a city like Exeter, where it was 5.75d. per unit. Both these cities were about the size of Londonderry, and they pointed out that the city of Glasgow, though having a population of ten times that of Londonderry, charged, according to the published returns, 6.2½d., or considerably more than the price suggested by Mr. Christie for Londonderry.

**Newcastle.**—The quarterly meeting of the Down County Council was held at Downpatrick, Colonel Forde (chairman) presiding.

Mr. Matthew King, Newcastle, proposed, and Mr. Healy seconded, that £8,000 be granted as required by the Treasury to supplement the £5,000 for the reconstruction and improvement of the Newcastle pier.

The resolution was adopted unanimously in favour of the project.

**Newtownards.**—At a meeting of the Urban Council a report was presented intimating that the whole of the streets of the town had been divided into four parts, and it was moved that contracts be taken for the four divisions for materials only, the surfacemen being kept under their own control. Mr. Lamon, C.E., is the town surveyor.

## GRANITE, STONE, AND MARBLE.

It is much to be regretted that more determined and systematic efforts are not made to improve the position of the quarrying industry in the United Kingdom. The demand for coloured marbles in the home market is constantly on the increase, and occasions large importations from France, Italy and Belgium, and at the same time there is a practically inexhaustible supply of the raw material within the compass of the British Islands themselves. It is curious that in times like these, when it is difficult to find profitable outlets for English capital, that so little of it is directed to this particular industry, especially in view of the large sums constantly being invested in the foreign marble trade. It is not as if the beauty of the marble found in Great Britain and Ireland was in any way inferior to the marbles for which we pay such large sums to the foreign quarry owners, for it is possible to obtain the most beautiful of ornamental stones without the necessity of seeking fields afar.

The red marbles of Cork, the green of Connemara, and the black of Galway and Kilkenny are well-known samples of Irish productions; while the marbles of Plymouth and Torquay, of Derbyshire and Dorset, afford evidence of the variety of material which is at our disposal. Then there are the serpentines of Cornwall. Although these cannot be properly classed as marbles they are among the most beautiful of ornamental stones. There are few spots around the British coast more lovely than Kynance Cove; there the serpentine rock, in all its varied tints, has been polished by the beat of the Atlantic waves and is rendered more striking and charming by its contrast with the white sands of the shore. The hard Irish limestone, from which so many monuments have been carved, has been proved to be one of the most durable of stones. In the Cathedral of Kilkenny it has stood the wear and tear of centuries, and mouldings cut in it still stand with the members sharp and clear. Some of those curious round towers peculiar to Ireland, built at the time when the Dane and the Norseman periodically ravaged our coasts, still stand to-day as strong as when they served

as places of refuge from the cruel invaders, long before the time of Strongbow, or even of the coming of William the Conqueror to our south-eastern shores. Many of the ancient Celtic crosses, of which such a number are still in existence, bear equal testimony to the enduring character of the Irish stone.

The cross at Monasterboice, known as "Muiredach's Cross," is a striking example. It cannot be less than 1,000 years old—it may be something more, for of two possible Muiredachs, who might have erected it, we know from the Irish annals that one died in 844 and the other in 924. Yet the inscription on the lowest part of the shaft, which runs, "A prayer for Muiredach, by whom was made this cross," is yet visible, and even the finely-carved panels, representing various Biblical subjects, are still in a wonderful state of preservation. The illustration of this cross, from a photo-



"Muiredach's Cross," Monasterboice, Ireland.

*Block kindly lent by the Master Builders' Associations' Journal*

graph by Mr. W. E. Lawrence, of Dublin, will give some idea of the weather-resisting properties of Irish stone.

That the beauty of Irish marble is appreciated in the United States has only lately been exemplified. According to a New York periodical, "one of the most striking jobs of marble-work recently done in the city" is to be seen in the magnificent house of the University Club on Fifth Avenue. The vaulted ceiling surrounding the sides of the spacious main hall are supported by columns of green Connemara marble, while pilasters of the same material flank the doors in the side halls; and in the huge chimney-piece opposite the main entrance there are eight round columns, each a monolith measuring 15ft. by 2ft. 3in. There are four corner pilasters of the same dimensions, and four wall pilasters 15ft. by 2ft. 3in. and 6in. in thickness. The marble is richly variegated, running from Royal Serpentine through all

the tints of grey-green and greenish yellow. "Nothing in the way of printer's ink," says the New York writer, "can convey an impression of the rich-coloured effect of this Irish marble."

But it is not alone in the possession of marble of unrivalled beauty that Ireland lays claim to the users of decorative stones. On the western coast there are huge deposits of fine granite covering many thousands of acres. It is to be found in the most varied tints, from the lighter coral pink to the deepest red, and from a dark grey to a stone which is almost white. There have been many tentative attempts to work this beautiful material, and some time ago a really excellent set of samples was shown at one of the Building Trades Exhibitions; but if the trade is to be profitably developed at all it must be on a considerable scale, and capital might be better invested in a home industry of this kind than in speculative mining ventures in foreign lands which only too often swallow up all the credulous investors' money, never to give the least return.

In memory of the late Agostino Gatti, a noble Gothic mausoleum in marble and polished granite, very effectively carved, has just been erected over the family vault in the Roman Catholic cemetery at Kensal Green. The interior, forming a mortuary chapel, is lit from the top through coloured glass, and closed with massive bronze doors, having stained-glass panels. The memorial has been designed and executed by Mr. E. J. Physick.—"Master Builders Association Journal," of Liverpool and London.



## A.A.I. JOTTINGS.

The Association Annual Smoking Concert was held on October 24th and, as usual, there was no need to complain of the attendance of members and their friends. There were over seventy present, and towards the end of the evening the "churchwardens" and the Craven Mixture had done their work, and it was difficult to see from one end of the room to the other. The programme, which had been arranged by the Sub-committee, was a very enjoyable one. Amongst the gentlemen who contributed to the evening's amusement, both by song and music, were the following:—Messrs. Hicks, Coleman, O'Connor, Fitzgerald, Baird, Conolly, Sealy Jeffares, Wrenn, Briscoe, Rogers, Doolin, Coffey, and Mercer. Mr. Joyce kindly obliged with some of his inimitable card tricks, and the evening terminated with Mr. Hicks' song, "Fuzzy-Wuzzy," followed by "Auld Lang Syne." A feature of the evening, and one that has never been introduced into former A.A. Smoking Concerts, was a quartette (Messrs. Buchanan, Brock, Scott and Hicks), who rendered various glees, much to the enjoyment of those present.

The Sub-committee should feel flattered, for members are already asking for the date of the next concert.

One of the most interesting papers that have yet been read before the Association was delivered by Mr. T. E. Hudman on November 7th at the Grosvenor Hotel. The

title, "Architectural Practice 200 years ago," was in itself sufficient to command interest. The paper showed that Mr. Hudman must have spent much time in searching "musty tomes" for the data he laid before us. The various qualities which were expected in a young architect of those days, to say nothing of the knowledge he required, would drive the present-day pupil to despair. Imagine him being "ingenious and docile," and yet having a thorough knowledge of Design, Geometry, Optics, Arithmetic, History, Philosophy, Music, Medicine, Law and Astrology. Apparently in those mediæval days the budding architect had no need to be skilled in Construction.

The elements were most unfavourable on the evening of the 7th, and this must have had much to do with the rather meagre attendance. It seems a very poor compliment to a lecturer who has given much pains to his subject, that members should stay away for a shower of rain.

A Lantern exhibition was advertised to conclude the evening, and for the purpose Mr. Hudman had gathered together a large collection of slides of various interesting nooks and corners of 17th and 18th century Dublin. The Association lantern proved very refractory, and the lecturer, after showing a few slides in a pale misty light, very kindly offered to show them again under more favourable auspices.

The reports to hand from the Design Class are very encouraging. There was a record attendance at the first meeting.

It is to be hoped that every member, senior and junior, will endeavour to be present at Mr. A. Scott's lecture on "Round Towers of Ireland" on November 21st.

The subject is one that certainly should appeal to every Irish architect. The paper will be illustrated with lantern views.

### Dates for A.A.I. Members.

Thursday, Nov. 16th.—22 Clare street, 8 p.m., Design Class, "Domestic Details."—F. G. Hicks.

Tuesday, Nov. 21st.—Grosvenor Hotel, 8 p.m., ordinary meeting, "Round Towers of Ireland."—Anthony Scott.

Thursday, Nov. 23rd.—22 Clare street, 8 p.m., Construction Class, "Brickwork."—A. J. McGloughlin.

Thursday, Nov. 30th.—22 Clare street, 8 p.m., Design Class, "Domestic Exteriors."—R. C. Orpen.

"OCULUS."

## ANNALS OF MONKSTOWN

AND

SOME NEIGHBOURING PARISHES IN THE  
COUNTY OF DUBLIN.

BY FRANCIS ELRINGTON BALL, M.R.I.A., F.R.S.A.I.

### CHAPTER V.—Continued.

1500—1600.

1563—Thomas Fitzwilliam, of Merrion; Robert Pipho, of Hollywood; William Basnett and George Wolverston, of Stillorgan, Captains of the O'Byrnes' Country, were appointed commissioners to execute martial law in the County Dublin.—*Fiant*, Elizabeth, No. 582.

1564—The tithes of Newtown were leased by the Dean and Chapter of Holy Trinity to Sir Nicholas Cor, of Dublin, Chaplain, and Gerald Long, of Simonscourt, Yeoman.—*Christ Church Deed*, No. 1296.

1564—George Wolverston, of Stillorgan, and William Wolverston, of Newtown, were, amongst others, granted a pardon in consideration of their services against the Irish.—*Fiant*, Elizabeth, No. 660.

1565—Sir Henry Sidney landed at Dalkey on Sunday, January 13th, in the forenoon, on his arrival as Lord Deputy. He spent that night at Monkstown, and proceeded the next morning to Merrion Castle—the residence of

Thomas Fitzwilliam—whence he made “his solemn entry” into Dublin.—*D’Alton’s History of the County Dublin*, p. 860. See for account of Sidney’s journey from London, which occupied two months, *Irish Builder* for March 1, 1897. Sir Henry was father of Sir Philip Sidney. He came first to Ireland with his brother-in-law, the Earl of Sussex, and took part in the expedition against the Scottish invaders.—See notice of Sidney in *Dict. of Nat. Biog.*

1565—A pardon was granted to James Bathe, of Drumcondra, Chief Baron of the Exchequer, to his son and heir, John, and to his trustees of intrusions and alienations of the lands, rectory, and tithes of Kilmacud.—*Fiant*, Elizabeth, No. 770.

1566—Christopher Barnewall writes on April 22 to Cecil, saying that he has Monkstown for twenty years yet to come, and prays that the grant thereof to Sir Thomas Cusack may be stayed.—*Col. of State Papers, Ireland*.

1566—The Dean and Chapter of Holy Trinity leased to Henry Walsh, of “Suttonstown,” gent., houses at Dalkey, in the occupation of various persons, including Sir John Sheridan, chaplain, and also leased to Shane Kenny “in-clane” a house and land there.—*Christ Church Deeds*, Nos. 1,302, 1,306.

1566—A pardon was granted to James Goodman, Jun., of Loughlinstown, and Charles Walsh, of Newtown, gent., for having rescued one Walsh on the King’s highway at Shanganagh. Walsh had been arrested at Old Connaught by the sub-sheriff for having robbed Gormle O’Clondowill, of Glencullen, of a brass pan, worth 26s 4d; two galleons of butter, worth 18d each; three sheep, worth 2s each; one night-gown, worth 10s; two women’s gowns, worth 20s each; and one cloak, worth 5s.—*Fiant*, Elizabeth, No. 856.

1566—James Goodman, Jun., was appointed a Commissioner to execute martial law “from the water of the Liffey to the water of Arklow and as far as the O’Byrnes’ country stretcheth.”—*Ibid*, Nos. 144, 999, 1,196.

1567—A pardon was granted to George Wolverston, of Stillorgan, and Thomas Wolverston, of “Knockfergose,” gentlemen, provided they gave security to keep the peace.—*Ibid*, No. 1,162.

1567—A pardon was granted to Theobald Aspoll, of “Templekargan,” gent., Tirelagh O’Dougll, of Tully, priest, and others. The *fiant* recites that Aspoll had aided William Aspoll and Thomas Aspoll, late of Loughlinstown, Kerns, and others, knowing them to have levied war against the Queen at Bullock and elsewhere, from the 20th to the 30th of the previous December.—*Ibid*, No. 1,158.

1567—A pardon was granted to Richard Walsh, of Carrickmines, gent.—*Ibid*, No. 994.

1568—Mark Barnewall writes on Feb. 15 to Cecil, asking that Monkstown, then in the tenure of Sir Christopher Barnewall, might not be passed to Sir Thomas Cusack, the Lord Chancellor.—*Col. of State Papers, Ireland*.

1568—Laughanstown was leased by the Dean and Chapter of Holy Trinity to John Crahame, of Loughlinstown, gent.—*Christ Church Deed*, No. 1,308.

1569—Some of the lands held by James Goodman, of Loughlinstown, was freed from subsidy, as he was liable “to be charged to hostings.”—*Fiant*, Elizabeth, No. 1,284.

1570—A pardon was granted to George Wolverston, of Stillorgan, yeoman, on his paying a fine of 20s.—*Ibid*, No. 1,739.

1571—A pardon was granted to Owen Walsh, of Brennanstown, and Robt. Walsh, of Leperstown.—*Ibid*, No. 1783.

1571—Christopher de St. Lawrence, Lord of Howth, was granted the wardship and marriage of John, son and heir of Peter Talbot, late of Fassroe, and custody of his lands at Bullock during the minority.—*Ibid*, No. 1,779.

1571—A lease of the tithe corn and hay of Newtown-on-the-Strand, “alias Newtown juxta Mare,” on which Seapoint

is now built, was granted by the Crown to James Ryan.—*Ibid*, No. 1,733.

1572—Possession of his lands was granted to Richard, son and heir of William Walsh, late of Carrickmines.—*Ibid*, No. 2,166.

1572—Brennanstown, Keatingsland, and Priorsland were leased by the Dean and Chapter of Holy Trinity to Owen Walsh, of Brennanstown. Walsh was bound to plant twenty ash, oak, or such like trees on Brennanstown every year.—*Christ Church Deed*, No. 1,324.

1573—James Goodman, of Loughlinstown, and Richard Walsh, of Carrickmines, were appointed to muster the inhabitants of the Co. Dublin.—*Fiant*, Elizabeth, No. 2,345.

1573—The tithes of Newtown were leased to James Stanyhurst, of Dublin.—*Ibid*, No. 2,239.

1573—John Bathe, of Drumcondra, and his trustees gave the rectory and church of Kilmacud to the Dean and Chapter of Holy Trinity.—*Christ Church Deeds*, Nos. 1,329, 1,330.

1574—James Goodman, of Loughlinstown, was appointed to muster the inhabitants of the Co. Dublin.—*Fiant*, Elizabeth, No. 2,444.

1574—A pardon was granted to Sir Thomas Fitzwilliam, of Merrion; James Goodman, of Loughlinstown; Richard Walsh, of Carrickmines; John Walsh, of Shanganagh; Owen Walsh, of Brennanstown; Robert Walsh, of Leperstown; and a number of others.—*Ibid*, No. 2,534.

1575—William Wolverston is included in a list of “impotent soldiers.”—*Col. of State Papers, Ireland*.

1575—During a plague which devastated Dublin, several of the inhabitants took refuge on Dalkey Island.—*D’Alton’s Hist. of the Co. Dublin*, p. 890.

1575—Some of the possessions of St. Mary’s Abbey, near Dalkey, and the tithes of Bullock were leased by the Crown to Thomas, Earl of Ormonde.—*Fiants*, Elizabeth, Nos. 2,560, 2,562.

1575—The Dean and Chapter of Holy Trinity leased to Thomas Morgan, of Dalkey, a messuage with a garden on the west side of Dalkey Church and land in the fields of Dalkey. Morgan undertook to build a thatched house and to serve the Dean, when at Kill of the Grange, with such fish as he could conveniently get.—*Christ Church Deed* No. 1,341.

1576—James Goodman, of Loughlinstown, died, and directed in his will that he should be buried in his parish church at Killiney.—*Prerogative Will*.

1577—A pardon was granted to Richard Walsh, of Carrickmines, for intrusions and alienations of the lands and rectory of Kiltarnan.—*Fiant*, Elizabeth, No. 3,098.

1577—A pardon was granted to James Eustace, son and heir of Rowland, Viscount Baltinglass, Mary Travers, his wife, John Cheevers, son and heir of Sir Christopher Cheevers, of Macetown, Co. Meath, Katherine Travers, his wife, Robert Piphoo, of Hollywood, Genet Preston, his wife, and to various trustees of all intrusions and alienations of the manor of Monkstown, the lands of Monkstown, Newtown and Cornel’s Court, and the advowson of the church of St. Mochonna, of Monkstown, the heritage of Sir John Travers.—*Ibid*, No. 3,146.

1577—A pardon was granted to various foot soldiers residing at Carrickmines, Glenmuck, Leperstown, and Brennanstown.—*Ibid*, No. 3,151.

1577—The tithes of Monkstown and of Newtown were leased to Thomas, Earl of Ossory.—*Ibid*, No. 2,960.

1577—The premises which were leased in 1566 to Henry Walsh were leased to Alderman Walter Ball, Mayor of Dublin in 1580.—*Christ Church Deed*, No. 1,346.

1578—The Dean and Chapter of Holy Trinity leased to Jacques Wingfield, Master of the Ordnance, the ruinous church, churchyard, manse and church land of Stillorgan, with the tithes, at a rent of £10.—*Ibid*, No. 1,348. Wingfield was a collateral ancestor of the Viscounts Powerscourt

He came to this country in May, 1566, in the train of the Earl of Sussex, and was appointed in 1568 to hold the office of Master of the Ordnance jointly with Sir John Travers. In 1561 he was given a commission to proceed against the O'Byrnes and O'Tooles, and reduced these tribes to order. He was sworn of the Privy Council, and granted in 1566 the post of Constable of Dublin Castle.—*Col. of Carew State Papers; Fiant*s, Elizabeth, passim.

1578—A pardon was granted to James Wolverston, who was a son of George Wolverston, of Stillorgan, soldier, at the suit of Jacques Wingfield, Master of the Ordnance.—*Fiant*, Elizabeth, No. 3,406.

(To be continued.)

## TO CORRESPONDENTS.

**Clerk of Works.**—Your letter was very welcome, and enclosed communication will be inserted in our next, as our space was quite filled up before its arrival. **C.K.D.**—Many thanks for kind letter and enclosure, which you will see has been utilised. **Harry Hems** (Exeter).—Greatly obliged for lovely photo and cuttings, and your good wishes were much appreciated. No room, however, this time. **J.P. McG.** (Derry).—Your epistle was cheering, and we are glad you are pleased with our journal. **T. McM.** (Belfast).—Thanks for correction. A revised paragraph will appear next number, as the "Building News" matter has already gone to press. A Belfast architect informed us. **R.F.** (Dublin).—Delighted you enjoy the *Irish Builder*, and we return your good wishes. Everybody is pleased with the great improvement, and our circulation is going up quickly.

## MARKET PRICES.

### OILS AND PAINTS.

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Do. Russian .. ..	"		0	0	5 3/8	—	5	5/8
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Do. red .. ..	"		0	19	1 1/2	—	—	—

### COMPETITIONS.

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Assembly's Office, Belfast, November 1, 1899.

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Appointment	To whom	Salary	Last date
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Assistant Surveyor ... ..	Public Works Department of Northern Nigeria ... ..	£400 to £500 ... ..	— —

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Design	Advertised by	Premium	Last date
Water Scheme for St. Agnes, Cornwall ...	John Angwin, Clerk, St. Agnes, Cornwall	£25 ... ..	November 30th
Infectious Diseases Hospital, Bury ...	Corporation of Bury, Lancashire ...	£100, £50, and £25 ... ..	December 1st
Workhouse Infirmary, Leicester ...	Board of Guardians, Leicester ...	£100, £50, and £25 ... ..	" 1st
Ilford Church ... ..	J. Lamb, 20, Belmont Road, Ilford, Essex	£20, £15, £10 ... ..	" 12th
Council Offices, Lymm ... ..	W. Mullard, Clerk, Council Offices, Lymm	£25, £15 ... ..	" 15th

CONTRACTS OPEN.

Work	For whom	Apply to	Last date
Inclosure Walls, &c., Foyle Street Market, Londonderry ... ..	Corporation, Londonderry ... ..	J. G. Ferguson and Son, Architects, Londonderry ... ..	November 27th
Alterations to Post Office, Dublin ...	Board of Public Works, Ireland ...	Secretary, Board of Works ...	— —
Rebuilding Dye-house, &c., Ballyclare ...	Whitepark Finishing Company, Ballyclare	— — —	— —
Villa at Helen's Bay, Co. Down	— — —	J. W. Whiteford, C.E., 28 Waring Street, Belfast ... ..	— —
Supplying 10,000 red Baltic sleepers, 6ft. by 8in. by 4 in. ... ..	Tralee and Dingle Light Railway ...	Engineer's Office, Tralee ...	June, 1900

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**CURRAGH.**—For carrying out alterations and additions to the Wesleyan Soldiers' Home, Curragh Camp. Mr. George T. Beckett, Architect, Dublin. Quantities by P. and D. W. Morris, Harcourt-street, Dublin.

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Whelan (Newry) ... ..	884 15 4
Collen Bros. (accepted) (on own quantities) ... ..	836 0 0

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Dobson and Curtis ... ..	106 15 0
Maguire and Gatchell ... ..	94 16 0
Collen Bros. (accepted) ... ..	79 0 0

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Lewis Moore ... ..	£1,884 9 0
J. Pemberton and Sons ... ..	1,875 0 0
J. and P. Good, Ltd. ... ..	1,785 0 0
Collen Bros. ... ..	1,743 0 0
John Pemberton ... ..	1,710 0 0
James Beckett ... ..	1,700 0 0
P. Hanway ... ..	*1,700 0 0

\*This estimate was subsequently provisionally approved at the reduced sum of £1,500, subject to passing of scheme by National Board of Education.

**KNOCKAVERY.**—For construction of main sewers for the Knockaverry District. Mr. W. Hill, Engineer, 28 South Mall, Cork.

J. Murphy ... ..	£2,300 0 0	Murray and Son ... ..	£1,857 0 0
J. White ... ..	1,840 0 0	M. Connors, Youghal (accepted) ... ..	1,600 0 0

**LONDONDERRY.**—For the execution of waterworks, Killea, for the Council of the County Borough of Londonderry. Mr. J. J. S. Barnhill, C.E., 1A Strand, Londonderry.

H. and J. Martin ... ..	£32 271 0 0
Fisher and Le Fanu ... ..	30,815 9 5
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J. McKee and Sons, Dungannon (accepted) ... ..	22,573 16 8
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**NEW ROSS.**—For enlargement and improvement of the board-room of the New Ross Union Workhouse.

A. Carty ... ..	£250 18 0	A. Cullen ... ..	£234 0 0
J. Connolly ... ..	250 0 0	M. Baillie, Waterford (accepted) ... ..	225 0 0

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J. and W. Stuart, Adelaide Steet, Belfast ... ..	£6,390	A. Wheelan, Canal Street, Newry ... ..	£4,700
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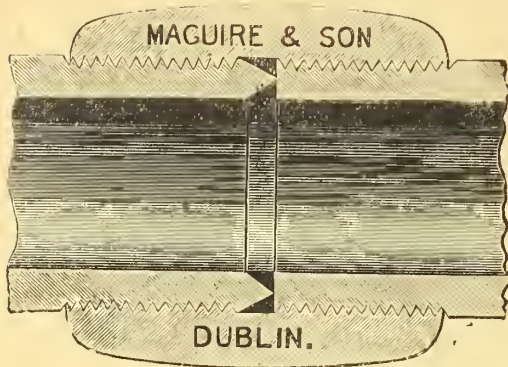
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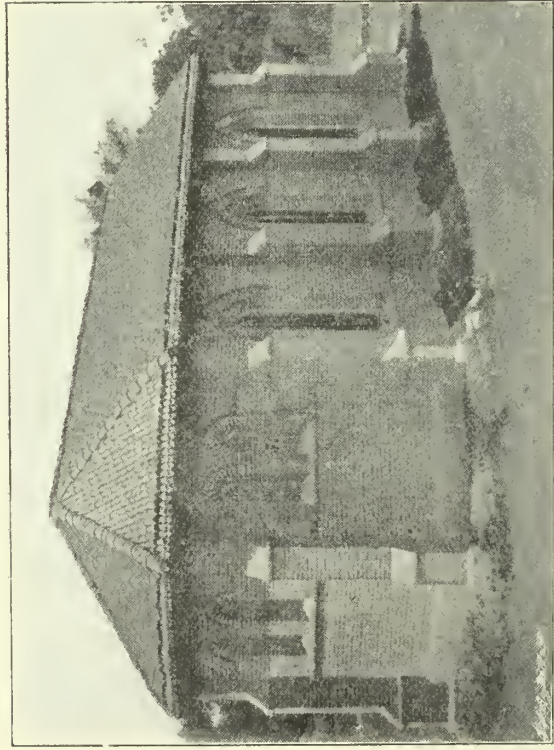
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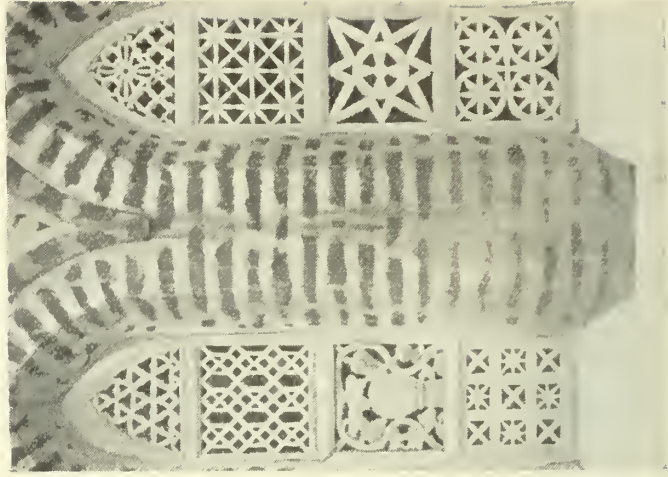
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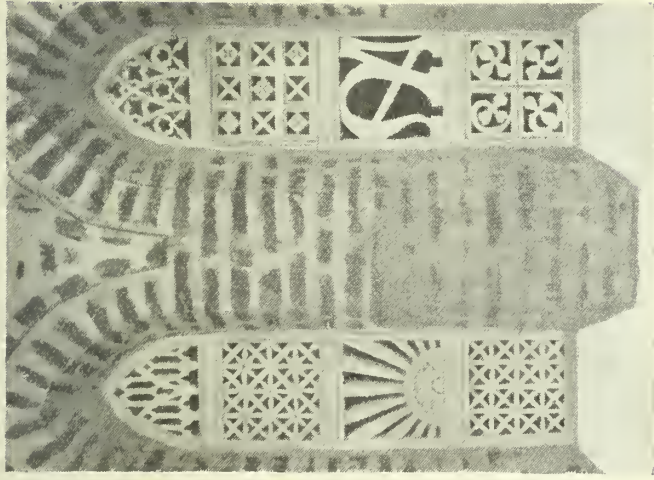
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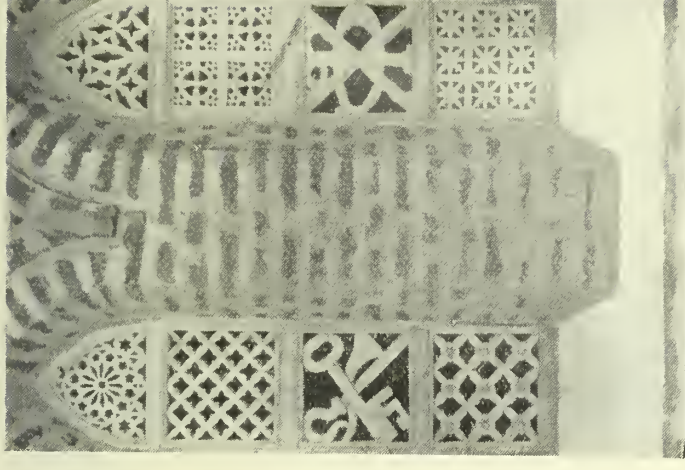
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# The Irish Builder

A JOURNAL DEVOTED TO

ARCHITECTURE, \* ARCHÆOLOGY, \* ENGINEERING, \* SANITATION,

ARTS AND HANDICRAFTS.

1st & 15th of the Month.

[Estab. Jan. 1859.]

No. 958.—Vol. XLI

DUBLIN OFFICE.  
13 FLEET STREET.

December 15, 1899.

LONDON OFFICE.  
15 MONTAGUE PLACE, RUSSELL SQUARE, W.C.

Price 3d.

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## NOTICES.

The *Irish Builder* is published twice a Month, on the 1st and 15th, and may be ordered from any Newsagent, or direct from the Offices, - 13 Fleet Street, Dublin.

We have also established a London Office at 15 Montague Place, Russell Square, W.C., and all English, Scotch, and Welsh inquiries concerning copies of the paper and advertisements should be addressed there.

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### Editorial.

Literary matter and drawings to be addressed to the *Editor*, and must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. We do not hold ourselves responsible for the opinions of correspondents.

Notes of works (especially contemplated works), contracts, reports, &c., are always welcome. Drawings and photographs are particularly acceptable.

### Publishing.

All business communications to be addressed to the *Manager*. Advertisements must reach the office two days before the date of publication. The charge for Contracts, Notices, Prospectuses, Competitions, &c., is 6d. per line. Other advertisement rates can be had on application.

### Payments.

Cheques and Postal Orders to be made payable to The Proprietor, *Irish Builder*.

Look out for next issue, which will start an Improved series.

## COMMENTS.

### Old Dublin Mansions.

A London upholsterer sued a Dublin furniture dealer the other day for some £516 damages for breach of contract for the non-delivery of two carved marble chimney pieces which were said to have been sold out of the premises of the National Club, Rutland Square, which premises were formerly the residence of the Marquis of Ormonde. This forcibly reminds us of the glories of our Irish capital that existed prior to the Act of Union, when towards the close of the last century the members of the old Irish Parliament resided in Dublin for nine months of the year and turned the city into a scene of social and gay life which has not since been equalled. Wherever one turns in Dublin relics of that ancient wealth and fashion meet the eye, to remind us of the prominent place our city then took among the capitals of Europe. The most important of these are the old town mansions of the Irish nobility, and the splendid residences which still line the splendid squares.

Such houses afford ample study for the architectural student of to-day, though their fate is sad to contemplate. The magnificent town residence of the Powerscourt family, to maintain which cost £10,000 a year, has for a long time been converted into a business establishment. The frontage towards William Street is a fine piece of domestic architecture, and inside everything is proportionately substantial and imposing, the staircase alone being a most expensive bit of work. A dozen measured drawings of this Powerscourt House, by Mr. F. Core, can now be seen at the Arts and Crafts Exhibition. The Kildare Street mansion of the Dukes of Leinster has fallen into the hands of the Royal Dublin Society, though it might have had a worse fate. Of the other magnificent houses which were built at that period may be mentioned the Rutland Square residence of the Charlemont family, which is now the Registrar-General's Office; Belvidere House, which is used as a college by the Jesuits; Aldborough House, which was occupied as a military barrack and has now become a storehouse for the Post Office; Tyrone House, given over to the Commissioners of National Education; the Rutland Square residence of the Conynghams, about to pass into the keeping of the County Council; and the Clontarf mansion of the Charlemonts, which is employed as a novitiate for the Christian Brothers.

It is lamentable, too, that so many thoroughfares of such fine houses have degenerated into tenements, in which the accommodation originally intended for one household has to serve for half a dozen. Handsomely plastered ceilings, beautiful marble chimney-pieces, rich carvings, and wainscotted walls, are still to be found in many a squalid tenement where poverty dwells with misery.

In those days, also, were many workers in the handicrafts, which industries have fallen into decay or have disappeared, though the refinement and beauty of the workmanship still left to us attest the powers of the Dublin craftsmen who lived and toiled only a few generations ago. But the times have changed, and Dublin has been reduced from a capital to a provincial centre.

#### Belfast Technical School.

There will shortly be another big architectural competition in Belfast, this time for a new Technical School. The particulars are not yet published, but the cost will be at least £30,000, and the site is St. Ann's Market, a vacant space to the rear of the Free Library in Royal Avenue.

The advantages of such an institution in so great a beehive of industry as Belfast cannot be overestimated, and it is a relief to learn that the Corporation, if only by a narrow majority, have decided on the erection of a complete new and up-to-date building instead of, as it was at first proposed, a scheme for converting the abandoned Ulster Works of the bankrupt firm of Messrs. Marcus Ward and Co. into a so-called technical school. In other countries experience has taught that it is bad policy to attempt to adopt an entirely different type of structure to the purposes of another building for different uses, especially as the requirements of modern institutions are so multifarious. Messrs. Marcus Ward's premises were put down as worth £25,000, but such a competent valuer as Mr. McLaughlin has estimated them at £17,000, and as we happen to know the building very well ourselves we can testify to the liberality of this sum. Mr. Bretland, M.I.C.E., the City Surveyor, gave the cost of the necessary alterations at £8,000, but it is quite improbable that this amount would be sufficient, especially as he was given very little data to go upon. No machinery was included in the £25,000, and it is said that Messrs. Marcus Ward's failure was largely due to obsolete plant.

Then again the Ulster Works are not central, for they are quite away from the workingclass districts, which gravitate towards the Lagan and the ship yards. The committee of the existing Technical School were invited by the Corporation in September, 1898, to select two of their number to act with the Corporation Committee. This was accepted, but we believe that up to the present these two gentlemen have heard no more of the matter. We presume, however, that the Corporation will now do its duty by building an entirely new school.

#### Payment of Road Contractors.

Stricter measures regarding the payment of road contractors are now being taken in many districts. For example, the Westmeath County Council have determined to abolish respites, which was a privilege frequently taken advantage of under the Grand Jury system by many road contractors. In future no payment will be made unless the full contract is completed, and in addition the Council have a standing order directing the prosecution of any road contractor who does not fulfil the terms of his contract in their entirety.

The County Council of Tyrone have also been severe on the road contractors who have failed to fulfil their obligations. At the Petty Sessions at Fintona a large number of such persons were prosecuted for default, and in most cases the magistrates allowed the defendants a very limited time within which to make amends by complying with the demands of the county surveyor.

It is to be hoped that the examples thus set will be followed in other localities, for in many places the roads were allowed to lapse into a scandalous condition for want of proper maintenance and many have been the complaints, especially from cyclists. A significant remark was made by one of those who were prosecuted when he stated that, in comparison with the old state of things, "they had sharper taskmasters now, and more of them."

#### Acquisition of Small Dwellings.

A contemporary gives some interesting particulars as to the Small Dwellings Acquisition Act, 1899, which is an at-

tempt to create house proprietors in urban districts. Subject to certain conditions, local authorities in Great Britain and Ireland are empowered to advance the bulk of the purchase money to a resident for this purpose, but the advance must not exceed a fixed proportion of the market value of the house, and must not be made at all where the local authority estimate the market value as exceeding £400. The interest may be as agreed upon between the purchaser and the local authority, but it must not exceed by more than ten shillings per cent., the rate at which such local authority can itself borrow from the Board of Public Works at the time of the purchase. There are stringent provisions as regards the applicant, who must satisfy the local authority that he is the tenant, and intends to continue to reside in the house. The title must be a good one, the premises must be in good sanitary condition and repair, and repayment to the local authority must be secured in the most effective way. Equally stringent are the provisions affecting matters after the purchase, as regards punctual payments by purchaser, occupation of the premises, insurance, use, and sanitation, and penalties are provided for breaches of these covenants. The local authority is defined by the 9th section of the Act to be the council of any county or borough, but under certain conditions Urban and Rural Councils may become local authorities also under the Act.

#### Dublin Swing Bridge.

The Port and Docks Board of Dublin have actually discovered that the old swing bridge at the entrance to the docks beyond the Custom House is antiquated, and have gravely announced this fact to the public. "Everytime," says the "Irish Figaro," "this obsolete contrivance is swung round by the united efforts of four or five ancient mariners, who are retained for the purpose, in order to permit a coaster to enter or leave the dock, traffic must be suspended for ten or fifteen minutes. The operation is conducted with all the slow solemnity of a state function. Evidently we are so prosperous in this community that time is of no value; we have no occasion whatever to bestir ourselves for there is absolutely no danger that trade rivals will catch up on us. We can safely defy them to do it, until and unless they commence to progress backwards—the bull is so expressive that it is permissible. Hydraulic power may be employed on such trumpery products of engineering science as the Tower Bridge in London or the Swinging Bridge near Manchester that carries an inland navigation canal over the ship canal; leave us the relics of the good old times that are so interesting to archæologists." The Liffey is spanned by several fine bridges, and we trust that the Port and Docks Board will add another, suitable to modern needs.

## CLASSIC DETAILS AND THEIR APPLICATION.

BY G. A. T. MIDDLETON, A.R.I.B.A., M.S.A.

Author of "House Drainage," "Surveying and Surveying Instruments," &c.

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#### X.—ITALIAN RENAISSANCE: DETAILS OF APPLIED ORDERS.

In the details of their orders, as in all else, the architects of the Italian Renaissance allowed themselves considerable liberty. To illustrate all the variations employed would consequently be impossible, for no two examples are precisely alike. The old Roman precedent is followed as to the general proportions and general scheme, and that is all. Consequently, the accompanying illustrations must be considered as typical only, and not as examples of hard-and-fast rules which are not in one iota to be departed from; and very beautiful types they are, being the details of the orders of the Courtyard of the Farnese Palace at Rome, of

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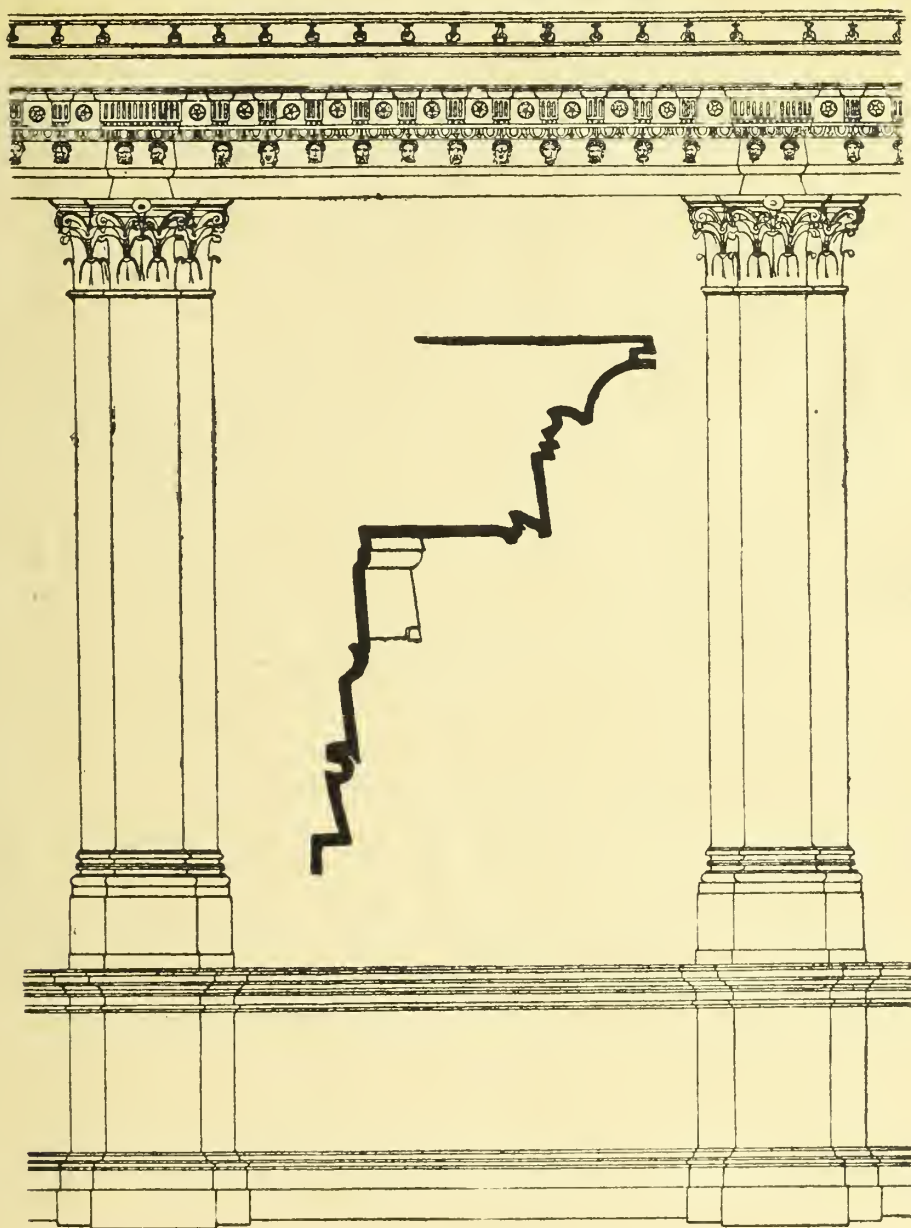
which a general elevation was given in the last instalment of this series, designed by Michael Angelo, and applied to the general outline of the building as laid down by San Gallo.

Writing, then, upon the text of the illustrations, and bearing in mind that the spirit of freedom evinced is the spirit of the Renaissance, coupled as it is with the highest application of the beauty of proportion, we are struck at once, in each of the orders, with the wonderful fulness, and appropriate richness, of Michael Angelo's details. In this respect the drawings must speak for themselves, as no words can so well point out in what their beauty consists. It lies just in that exact appreciation of form and correct use of ornament, with restraint to avoid its employment where

while the cornice so far departs from the traditions of the Doric order as to contain a row of dentils upon the bed-mould. The arches to both the lower stories are restrained in treatment, and the spandrels simply and successfully filled with circular pateræ.

The Ionic order, perhaps, conformed more nearly to tradition than either of the others, the only marked difference being in the sculptured swags upon the frieze: but, then, the Ionic frieze has at all times been open to great divergences of treatment.

The Corinthian order, on the other hand, shows considerable change and adaptability to its position. High up, and only to be viewed from close beneath it and directly in front—for it faces a comparatively narrow courtyard—it needed



Detail of Corinthian Order, Courtyard, Farnese Palace, Rome.

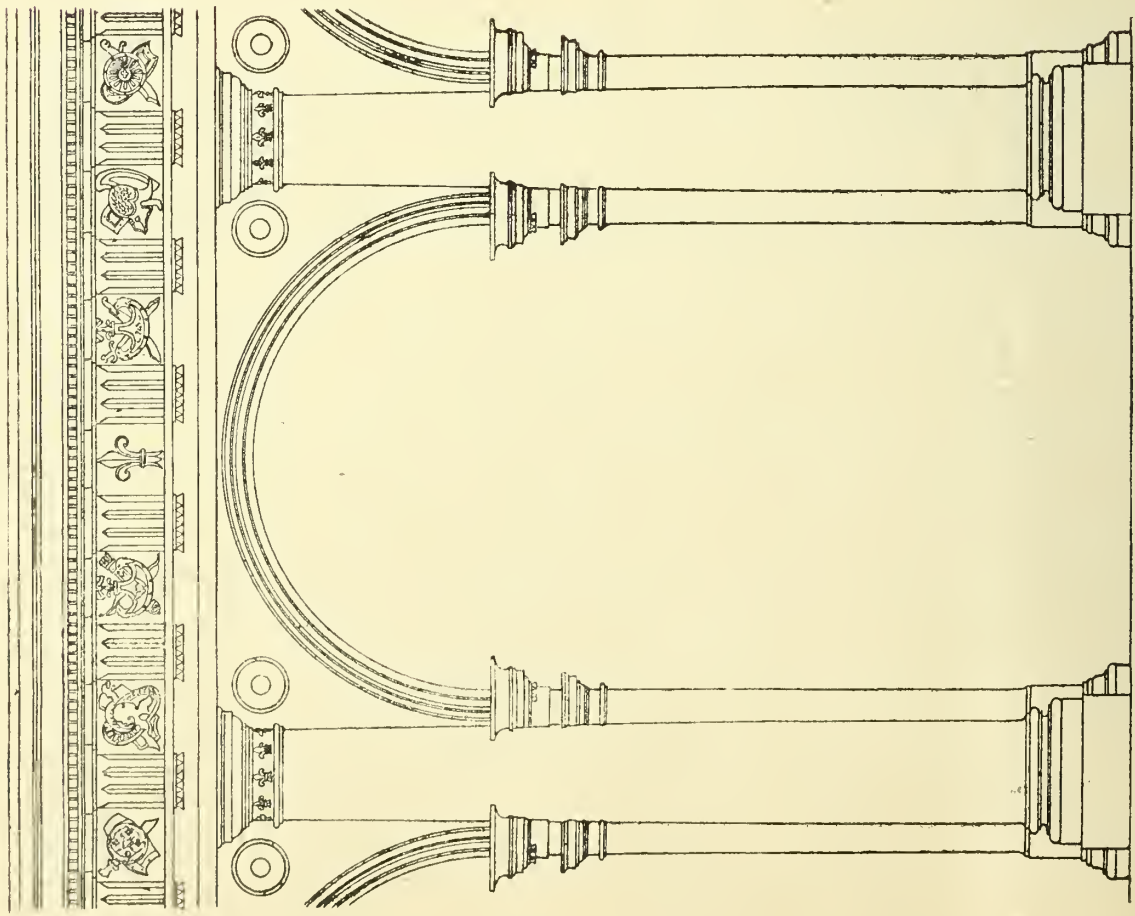
By Michael Angelo.

unnecessary, which evidences the true artist and architect in whatever style he may be called upon to work.

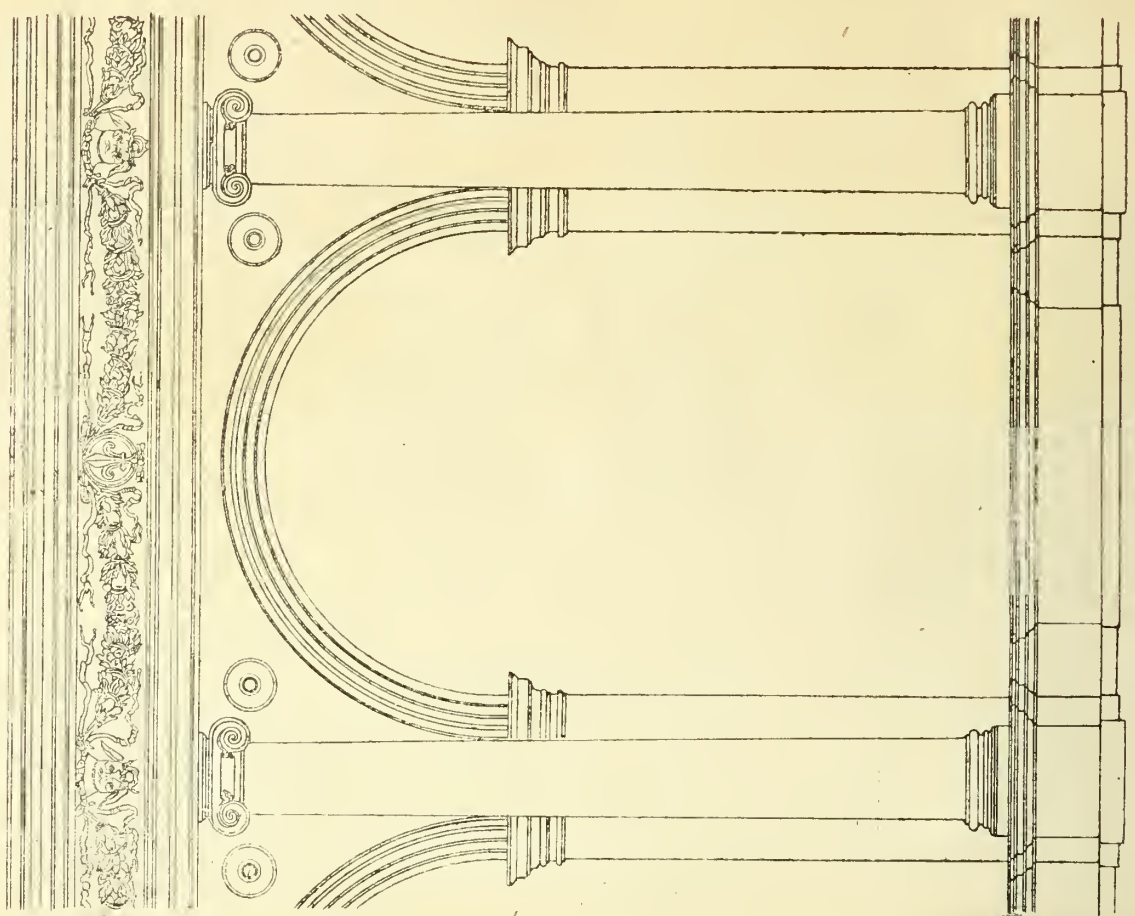
In the Doric order, the details of the arch impost are most noticeable, forming almost a complete order, with guttæ curiously placed, and with crowning cavetto moulding, all dying into the semi-circular Doric columns. These are themselves on quite simple Attic bases, are unfluted, and have ordinary caps, save for the enrichment in the form of the fleur-de-lys, which occurs round the necking, and is employed again and again upon the building elsewhere, as such armorial badges commonly were in all European countries at that date. The architrave is in two faces, and is shallow, while the frieze is deep, with prominent triglyphs, and with the metopes bearing sculptured coats of arms,

special treatment. Pilasters are used in place of columns, and the leaves of the capitals are simple in outline, but well projecting, giving richness of effect by sharp contrasts of light and shadow. Then, from the section, it will be seen that neither the architrave, the frieze, nor the corona of the cornice are vertical, but slope backwards, and so, according to the laws of perspective, appear much deeper when viewed from below than they are in reality, being foreshortened. The architrave and frieze particularly need this extension, for in elevation they appear shallow. The use of triglyphs in place of modillions (or consoles) under the cornice is also remarkable, and not so happy.

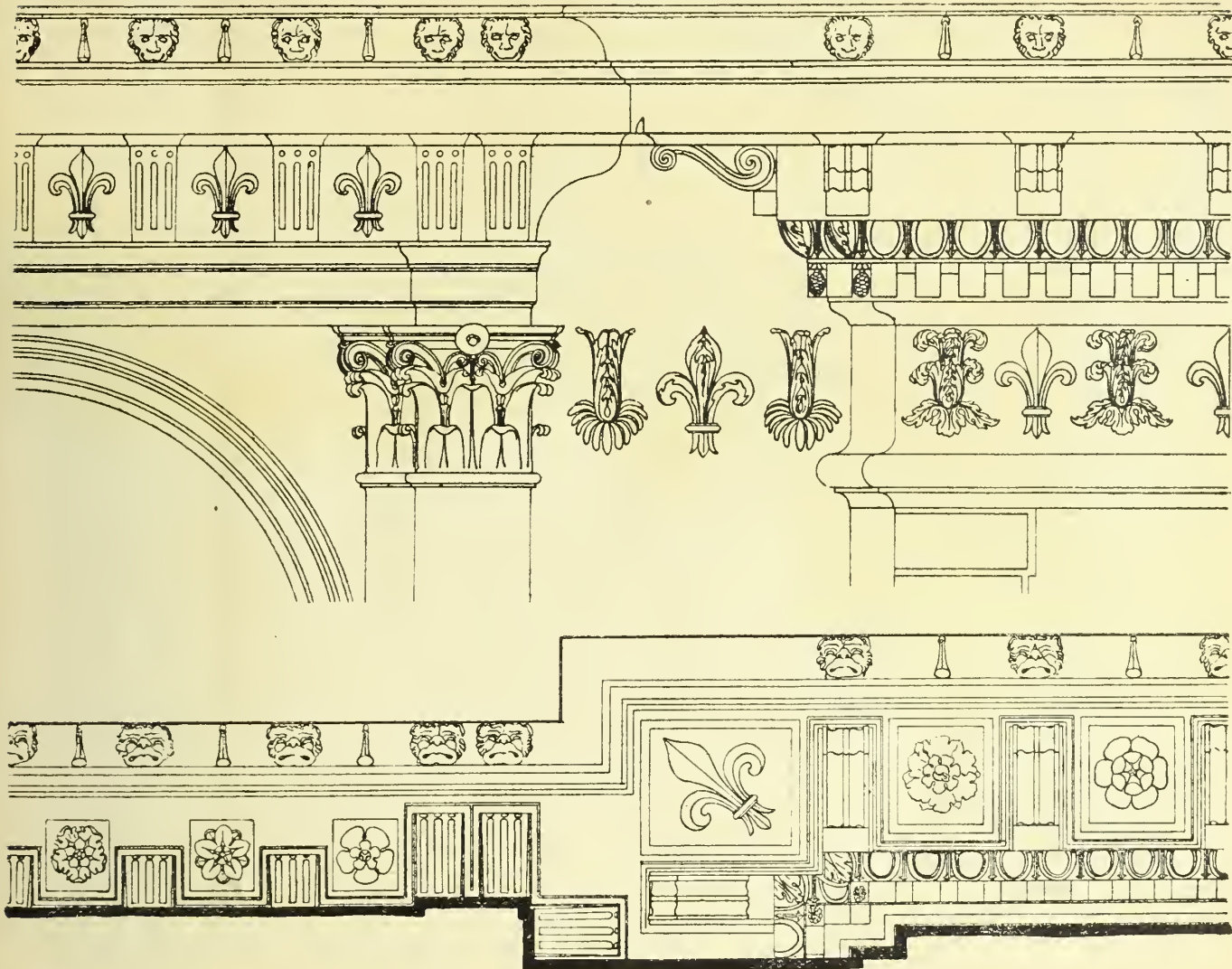
The great feature of the Farnese Palace, however, is the main cornice, crowning the exterior. Again it is best to



Detail of Doric Order, Courtyard, Farnese Palace. Rome.  
*By Michael Angelo.*



Detail of Ionic Order, Courtyard, Farnese Palace, Rome.  
*By Michael Angelo.*



Detail of Main Cornice of the Farnese Palace, Rome. By Michael Angelo.

leave the detail to speak for itself. There is no architrave, and the frieze is enriched with the *fleur-de-lys* alternating with an anthemion composed of acanthus leaves, while as for the rest there is no point which can be called uncommon; but it is strong and beautiful and suitable—and what more can or need be said? It is an example of power and restraint combined, and worthy to serve as a model; but as in it forms are used for which there is precedent, without copyism, so to copy this itself would not be wise, but rather it is the spirit in which it was devised which should be cultivated.

(To be continued).

## DIFFICULT FOUNDATIONS AND SUBSTRUCTURES.

An ordinary meeting of the Architectural Association of Ireland was held at the Grosvenor Hotel, Dublin, on Tuesday, Dec. 5th, at 8 o'clock, the President, Mr. Geo. P. Sherdian, A.R.I.B.A. in the chair. There was a fair attendance of members. The Hon. Secretary read the minutes of the previous meeting, which were signed, and five new members were nominated for election.

Mr. H. Norman Leask read a paper upon "Difficult Foundations and Substructures" of which the following is a resume:—

I have little to say original, so that I hope my plagiarism will be forgiven when I say that I quote freely from such authorities as Rankine, Baker, Patton, Walmsley, and from structure erected and standing on difficult sites designed by architects and engineers of repute, with the sole object of being of service, though it may be small, to the members of the Association.

Foundations are the most essential portion of any structure, whatever it may be that is reared above the crust of the earth or is sunk below it.

It is, therefore, of paramount importance that they should

be carefully considered, more especially when the structure on hand is to be located on ground of doubtful or known evil reputation.

I would suggest that before planning a structure, the site be carefully and fully surveyed both as regards extent, variation in contour, and the nature of the strata on which it is proposed to erect the said structure, by sinking trial pits or deep borings, which can readily be obtained by means of small gas barrels, for in many cases a soft, treacherous stratum may underlie a hard crust, but a few feet in depth. In the case of important structures, this proceeding is absolutely essential to the well-being of the structure, unless the history of the site is well-known and understood by previous experience adjacent to the site.

The reasons for so doing are very cogent, as is well-known, but as a rule the architect likes to spare his client these preliminary expenses, but when the proceeding is warranted either by the extent of the structure or the character of the strata under the proposed structure, it will be found to amply repay the expense, and save endless trouble, suspense, and mortification.

Difficult foundations may be classed under two heads—*natural* difficulties and *artificial* difficulties.

Natural difficulties arise out of the nature of the material on which it is proposed to erect a structure.

Artificial difficulties arise out of the conditions which exist on the boundaries, and the nature of and amount of load to be borne.

In fact, the difficulties encountered are not so much the means that have to be adopted to support the structure as those of trying to solve the problem economically, consistent with stability.

Under the head of natural difficulties, I will take the following materials on which it may be proposed to build:—

Quick Sand—Sand with running water unconfined.

Bog and Marsh—Alluvial deposits of considerable depths.

Recent Made Ground—Ground of unequal bearing power, such as part rock and part earth,

And under the head of artificial difficulties the following:—

The boundaries of the site enclosed by old buildings of doubtful foundation or construction, etc., below the ground floor level of which it is necessary we should go, either for cellar

space or for a suitable strata to build on. Site so surrounded that piling would be inadmissible. Site surrounded making it advisable to adopt some means to avoid eccentrically loaded footings. Excessive loads to be borne owing to the nature of the construction and future use of the proposed structure. When space at command is limited. Hydrostatic pressure on adjoining structures caused by excavation for basements, etc., and thus turning an ordinary wall into a retaining wall.

In order to arrive at what may be termed difficult soils on which to build under the foregoing conditions, I will call your attention momentarily to these tables.

#### BEARING POWER OF SOILS. &c.

WALMSLEY.	lbs. per sq. foot.
Dry made Ground or Soft Surface Clay ..	2500—3500
Alluvial deposits .. ..	1000—1500
Moist Clay .. ..	2000—3000
Dry Compact Clay .. ..	4000—5000
Thick do. do. .. ..	6000—10000
Loose Sand .. ..	2000—6000
Compact do. .. ..	4000—6000
Confined do. .. ..	10000—15000
Ordinary Sand and Gravel ..	4000—5000
Do. do. confined .. ..	8000—12000
Ordinary Rock .. ..	18000
Granite in Tower Bridge .. ..	32000
Brick do. do. .. ..	26000
London Clay, ultimate .. ..	8000
Safe limit arrived at by discussion of Members of R.I.B.A. .. ..	4000

BAKER.	4 to 8 tons per foot.
Clay dry .. ..	4 to 6 "
Sand .. ..	4 to 6 "
Clay and Sand .. ..	4 to 6 "
Sand and Gravel .. ..	8 to 10 "
Clay wet .. ..	1½ to 2 "
Alluvial deposits .. ..	½ to 1 "

PATTON.	18 to 180 tons.
Rock .. ..	2 to 3 "
Ordinary Soils .. ..	1 to 2 "
Soft .. ..	

#### NEW YORK BUILDING LAW.

Soft clay, 1 ton; ordinary clay and sand wet and springing, 2 tons—if dry excellent loam clay and sand firm and dry 3 tons; heavy firm coarse sand, stiff gravel or hard clay, 4 tons; piles 4,000 lbs. per foot.

If the heights of structures and contents be worked out from these tables, you will see that some soils will carry without appreciable settlement any load that they may be called upon to do in general practice, others again will require reinforcing either by consolidating the material—confining it—carrying the structure independent of it altogether by piles, pillars, cylinders, concrete, brick, or iron, down to the hard strata or the various other methods now at the disposal of the architect or engineer for overcoming these difficulties in the cheapest and most stable manner.

Unfortunately the site may be very circumscribed or founded by property erected already, these two items being very serious obstacles, and on them in a great measure must depend the method to be adopted.

As for instance, piling may damage adjacent buildings, deep excavations may undermine them, etc., or extension and costly underpiling may have to be executed; or again, the site being valuable and bounded with party walls, with which you cannot interfere, causes special methods to be adopted for carrying heavy loads encentric to a party wall foundation, leading to very difficult problems.

**PILES.**—Piling is the recourse adopted most frequently in this country when the nature of the site is such as appears to demand consolidation or a means of reaching a reliable stratum for bearing purposes, and are commonly met with in Belfast, Cork, Dundalk, etc. Piles are of various forms and materials and may be classed as timber, iron and sand piles—timber piles are generally of elm, larch, pitch pine, greenheart, oregon, sometimes of spruce, such as Norway poles, and may be divided into two more classes, viz., Bearing and Resistance that is those driven to the hard strata and those driven to refusal of drop of hammer of certain weight and fall. Both kinds may be driven with the aid of a jet.

**IRON PILES.**—Classed as screw piles—those driven by means of a jet—and those driven by hydraulic pressure to the hard strata. Screw and jet piles are not always sent to the hard strata.

Piles are mostly used in alluvial deposits, bog land, quick sand, mud, etc.

Where these extend to great depths Resistance Piles are employed supported by side friction, where within the usual dimensions of marketable timber they are driven to rest on the hard stratum and then become pillars, and where the site merely needs consolidation short piles are often driven close together.

In all cases the piles should be driven below lowest water line and the heads cut off at that level, otherwise they are unreliable and will ultimately fail by rotting.

There are many empirical formulae for obtaining the bearing power of piles, but owing to the great variation in the nature of the materials which have to be pierced they cannot be absolutely depended on but for approximate results which may form a fair guide.

Their use is almost compulsory in some soils, mud, bog, quick-sand, when they are underlaid by gravel, boulder, or rock, more especially when the soils are saturated or running water is present either submerging the site or prohibiting excavation in the open by its presence. Their greatest use is exemplified when such a site as above described is enclosed by adjacent structures of magnitude whose foundations are possibly carried on piles whose character is in all probability unknown. For if open cuts were used, inflow of the surrounding material would result, especially if made lower than the existing foundations, or if it resulted in a hydrostatic pressure against the pavement or foundation walls, as might be the case, the result being probably loss of life, with undoubtedly loss of property, time and money, otherwise the enterprise would be blocked. Piles would not accomplish the desired result either in probability, as the shaking of the surrounding soil is very considerable, and often results in law suits and danger to property.

Another method now in vogue both at home and abroad and with the most satisfactory results both as regards economy and efficiency in ensuring stability is that known as the "Grille."

The Grille, or Crib, or Raft, is essentially a thin layer of concrete on which is placed a system of rolled steel joists at intervals and these are flushed up level with concrete and superimposed transversely to those below, another system of rolled steel joists which are in turn flushed up and on which the walls or columns, etc., are started. Grills or Cribbs may either cover the entire area or in isolated platforms which cover an area exactly proportional to the unit bearing power of the earth to the superimposed load.

The important advantage steel has over wood, or concrete, is that the offset can be much greater and hence the foundations may be shallow and still not occupy the cellar space.

The lecturer next proceeded to fully describe the Caisson, which is a steel or iron cylinder. The system of airlocks by which means the workman passes from the ordinary atmospheric pressure on the earth's surface to the much higher pressure which has to be maintained in the working chamber, is identical with the waterlock on a canal. It is a curious fact that a workman will work one and a half times as hard in the compressed atmosphere of the working chamber as he will under normal conditions. The effect on the men is, however, often serious, as the change from one pressure to another causes deafness and paralysis unless slowly and carefully carried out.

A number of examples of home and American practice were given, with illustrations, and these vividly showed the serious difficulties which have occurred and have been overcome by the modern architect and engineer. The lecturer concluded his paper by suggesting that the Association should visit Messrs Paul & Vincent's Factory on Sir John Rogerson's Quay, where the Grille method of foundation has been successfully executed.

A vote of thanks to Mr. Leask, proposed by Mr. H. J. M'Gloughlin, and seconded by Mr. R. M. Butler, was carried unanimously.

A discussion followed in which Messrs T. E. Hudman, C. H. Ashworth, and others took part.

## BUSINESS PREMISES, EXCHEQUER ST., DUBLIN.

Our illustration shows three large blocks of business premises extending along one side of Dame Court and into Exchequer Street. They consist of the Acme Printing Works of Messrs. Hely's, Limited, completed about two years since; the Stock Room Buildings belonging to the Central Hotel Co., which were opened early in the present year; and the Furniture Warehouse of Messrs. Pim Bros., Limited, now in course of erection. Messrs. H. and J. Martin, Messrs. M. Meade and Son, and Messrs. J. and P. Good, are the builders respectively of these structures. Although the designs differ considerably from each other, they have many points in common. The fronts are faced with red brick and cut stone, the floors are formed of steel girders and concrete, and they are all lighted by electricity generated on the premises.

The block shown between Messrs. Hely's and the Stock Room building has not yet been commenced but it is likely soon to be taken in hands.

It will contain Messrs. Pim Bros'. workshops on the upper floors, and a covered courtyard on the ground level for the reception and delivery of their goods.

The architect of all the foregoing buildings is Mr. William M. Mitchell, F.R.I.B.A., of Leinster Street; Mr. J. H. Webb acting as Clerk of Works over Messrs. Hely's, and Mr. F. Hayes over the Central Hotel building, as well as Messrs. Pim Bros.



**Ardkeerin.**—Plans and specifications for the erection of a new school at Ardkeerin, Riverstown, Co. Sligo, have been prepared, and the work can be tendered for up to the 1st January.

**Balbriggan.**—St. George's Church, Balbriggan, Co. Dublin, has had its tower repaired, a new pulpit provided, and new pews.

**Balrothery.**—The Balrothery Rural District Council have given notice of an Improvement Scheme in pursuance of the Labourers (Ireland) Acts, 1883 to 1896. The sections of the Rural District to which the Scheme relates consists of the Electoral Divisions of Balbriggan, Ballyboghil, Balcadden, Clonmethan, Donabate, Garristown, Hollywood, Holmpatrick, Kilsallaghan, Kinsaley, Lusk, Malahide and Swords, and the estimated cost is £22,880.

**Bangor.**—A residence is about to be erected at Sandy Row, Bangor, Co. Down. The architect is Mr. J. V. Brennan, Belfast Bank Chambers, Belfast.

**Belfast.**—Tenders were lodged on 12th inst. for the new buildings at Donegall Square East and Chichester Street, for the Ocean Accident and Guarantee Corporation, Limited, Belfast. Messrs. Young and Mackenzie, Scottish Provident Buildings, Belfast, are the architects.

Eight shops and basements under same are to be put up at Donegall Square West, in extension of the Scottish Provident Institution. The architects are Messrs. Young and Mackenzie.

Alterations and improvements are about to be made to licensed premises in Roden Street, Belfast. The architect is Mr. W. J. Moore, Whitehall Buildings, Ann Street, Belfast.

The Belfast Tramway Company have just erected new premises at their headquarter depot in Sandy Row, at a cost of £26,000. Ten months ago, in pursuance of a scheme inaugurated four years back, the directorate decided to pull down the old structures and erect in their stead spacious buildings, fitted up in the most modern style, and possessing every feature of usefulness which experience could suggest. The plans and quantities were drawn up by Mr. Nance, secretary of the company, who is a fully qualified civil engineer, and under his personal supervision the contract has been carried out to the satisfaction of everyone concerned. It was a task of considerable dimensions. Accommodation for 312 horses was required, and the work had to be executed without in any way dislocating the ordinary business of the company. Extensive stores for the foraging of the numerous stud had also to be constructed, together with a number of apartments for the building and repair of carriages, as well as for the transaction of the other work incidental to the carrying on of the colossal establishment. By no means the smallest part of the undertaking was what is modestly called a "car shed"—a huge building whose size may best be estimated when it is stated that without pressure 73 cars can sit beneath the roof. The result is that at present the tramway company is possessed of one of the finest and best equipped depots in the three kingdoms, for, as intimated, the work now finished is only an extension of some previously undertaken. This original portion was itself of large size, supplying, as it did, stabling for 217 horses. Thus at the pre-

sent time 529 horses can be comfortably housed and attended to.

The foregoing will give the public a general idea of the nature of the work done, but a visit to the depot itself reveals many interesting details. Gaining admission by the bottle-necked entrance, the visitor is at once struck by the proportions of the car-shed. The roof, which is 30 feet high, is supported by immense pillars, arranged in such a manner that wherever viewed from they run in line. The walls are of brick, neatly whitewashed, and light and ventilation are secured by a glass arrangement placed on the roof. Flanking this spacious structure run the stabling, forage department, and the busy workshops of the company. All are equally interesting, and it is hard to say which should be inspected first. But as a selection must be made, the stabling may be dealt with. It consists of two kinds. The most important from the public standpoint is probably that where the ordinary work-a-day horse is stalled. The other is the hospital section, where sick and convalescing horses are looked after with as much tenderness as if they were in a veterinary hospital. This latter part is on the ground floor and contains thirty loose boxes, each 12 feet by 12 feet. The boxes are constructed of pitch-pine, with Musgrave fittings, so that it can be seen at once that they are of the most commodious and excellent quality. The arrangement for the admission of air is of a most ingenious character. To the windows, which are placed well over the horses' heads—the roofs being no less than 14 feet high—is attached a rod, which can be worked by a single lever. The shifting of this lever enables one to open all the ventilators at one and the same time. It was, however, foreseen that this might not always be desirable, and hence an arrangement for the opening of a limited number of windows is called into operation. The hinges on which the doors of the stalls swing were constructed in accordance with a plan devised by Mr. Nance himself, and seem of a very serviceable and durable character. A continuation of these stables is used for the reception and examination of horses which are about to enter the service.

Throughout, the building is lighted with incandescent gas, and the company pump by machinery all the water they require on week-days. The town supply is only used on Sundays, when the engines are not at work. The ceilings of the different buildings are coated with Portland cement, finished with Keen's, and lastly coated flat, a process which renders them very agreeable to the eye, and prevents dust or any other objectionable matter falling on the floors beneath. The laying of the foundations was a work of magnitude in itself. The nature of the ground is soft, with the result that the contractor was obliged to sink at the Oban Street side 18 feet before security could be obtained, and in the Innes Street direction 11 feet. These cavities were afterwards filled with concrete. The contractor for the entire of the building work was Mr. John Harvey, 143 Millfield. The plumbing required was executed by Mr. Baxter, of York Lane.

**Camolin.**—A dispensary medical officer's residence, offices, and other works are about to be built at Camolin.

**Carlow.**—New girls' schools are being added to the Convent of the Assumption at Carlow, from plans prepared by the late Mr. William Hague, of Dublin. They are two stories in height, and provide on each floor an assembly hall 48 feet by 32 feet, and a class room 25 feet by 16 feet. The outlay will be £2,500.

**Cork.**—No less than 1,400 cottages are to be erected in the Cork Rural District, and the legal expenses alone will amount to about £15 a cottage.

**Dublin.**—A new free library for North Dublin has just been opened at Charleville Mall, close to Newcomen Bridge. It has been erected by the contractors, Messrs. Joseph Pemberton and Son, of Charlemont Street, Dublin, under the personal supervision of the city architect, Mr. C. J. McCarthy, who prepared the plans.

**Kilkenny.**—The new Roman Catholic Church of St. Patrick, Kilkenny, was solemnly dedicated by the Most Rev. Dr. Brownrigg, Bishop of Ossory. The old building, the site for which was given by the Ormonde family so far back as 1871, had been outgrown by the needs of the congregation. The new building is decorated in style, and the high altar is of richly-carved alabaster with mosaic panels.

**Limerick.**—The foundation stone of the Catholic Training College in Limerick was recently laid by Bishop O'Dwyer.

**Londonderry.**—Eleven dwelling-houses are about to be put up in Kennedy Street for Mr. T. C. Wylie. Tenders were delivered on the 8th inst. to the architect, Mr. R. E. Buchanan, Castle Street.

The War Office authorities have concluded a contract with a Belfast firm for the extension of Ebrington Barracks, Londonderry, for the sum of £26,000.

**Sligo.**—New works and repairs are to be carried out in the Sligo County Infirmary, and tenders were sent in to the Secretary on 12th instant.



**Armagh.**—Plans and specifications have been lodged in connection with the proposed schemes of railway extension in Counties Armagh, Cavan and Monaghan. One of the proposed Bills is the re-entry of the Kingscourt, Keady, and Armagh Railway Bill, which was already before Parliament and rejected by a committee. This scheme is now altered from the previous route by including in it the Callan Valley route, between Armagh and Keady; it was the want of this route that got the Bill any real opposition it received last Session. The second Bill is put forward by the Great Northern Railway Company, and is a proposal to run a line joining Armagh to Keady and Castleblayney; and the third is a proposed line of railway communication between Newry and Keady and Tynan, there joining the Clogher Valley Light Railway.

**Athlone.**—The Athlone Urban Council have recently resolved on putting down an extensive section of sewage for the purpose of draining a number of small streets and lanes on the Roscommon side of the town. Tenders were advertised for the work, but none were received at the meeting of the Council. Another difficulty beset the Commissioners. Some of the landlords objected to the sewage pipes passing through their property, and it was also hinted that the Board of Works and Shannon Commissioners had objected to a portion of the scheme. It was ultimately resolved that the Council should employ labourers to do the work under the superintendence of Mr. E. Prendergast, C.E., in such portions of the scheme as were unobjected to.

**Bawnboy.**—The Bawnboy Rural District Council have invited applications from engineers for the preparation of plans, specifications, and estimates for the construction of certain sewerage works in the town of Ballinamore, in the above district.

**Belfast.**—The Corporation Committee, which waited on the Directors of the Belfast Street Tramways in London, got their expected rebuff. The Directors are only prepared to sell their property for over half a million, and the Corporation will be foolish if they accept. Meanwhile the perfectly futile Bill is to be gone on with, so that the expenses of the picnic party to London may be defrayed by the ratepayers.

**Birr.**—The Urban District Council of Birr has adopted a scheme prepared by its engineer, Mr. Luke L. Macassy, C.E., Belfast, for supplying the town and an extended area outside with a high-pressure water supply. The first scheme, which would have brought the water from the mountains, eleven miles distant, had to be abandoned, inasmuch as its cost, £21,000, was £5,000 in excess of the double valuation of the town, or the maximum limit in an Urban Council's borrowing powers, as now laid down by the Local Government Board. There being no other nearer catchment area that would lend itself to a gravitation system, Mr. Macassy hit upon an ingenious plan for obtaining an exhaustless supply of great purity almost inside of the town itself. It can be had by boring for a considerable distance, and penetrat-

ing through the great limestone strata. The cost will be £10,894, mostly for machinery. In the other scheme the loan of £21,000 would have been spread over fifty years, repayable at £1,143 annually; in this one of only £10,984 the instalments will be £955 per year. This apparent anomaly is explained by the fact that the loan for the machinery must now be paid back in twenty years.

**Clontarf.**—The Clontarf Commissioners are endeavouring, subject to sanction by Parliament, to arrange with the Tramway Company to obtain a supply of electric light from the Clontarf power station. Pembroke and Rathmines have also gone in for electric lighting schemes. Pembroke has decided on a further much-needed improvement in the shape of baths and wash-houses, which will cost about £5,000. A development of necessary local improvements such as those referred to will gradually, in the course of some years, raise township rates to as high a level as those of the city.

**Coleraine.**—At the monthly meeting of Coleraine Urban District Council, offers of sites for the public park, to be provided by the legacy of £3,000 to the town under the will of the late Mr. Hugh Anderson, J.P., were discussed as sent in by Mr. James Clarke, eight acres, at Ballasis, £700; Mr. James Hay, 8a. 2r. 17p., at Lodge Road (west side), £850; Mr. Crookshank (for Mr. John Huey, J.P.), 14a. 3r. 36p., at Millburn, £71 per annum; Mr. Hugh Young, 16a., at Harper's Hill, £300 for tenant's interest under the Hon. the Irish Society; Miss Laughlin, 16 statute acres, at Lodge Road (east side), £1,500; Mr. A. W. C. Whiteside, 18 statute acres, on Ballyrashane Road, £100 per acre. It was agreed that the Council should visit the various sites for inspection.

**Dublin.**—At a meeting of the Port and Docks Board, a report was read from the engineer stating that the annual cost of the maintenance of lights, buoys, and beacons within the port was £2,000. He also suggested that there should be four incandescent lights at the approaches to the bridges. The amount of dredging done during the past week was 15,500 tons, compared with 2,530 tons for the corresponding week last year.

The new scheme for the electric lighting of Dublin will cost £120,000, and no doubt will shortly be carried into effect now that Mr. Hammond has been appointed consulting electrical engineer to the Corporation. The Pigeon House Fort, which passed into the hands of the Corporation under their Main Drainage Act, will make an admirable power station, and will be used as one. The electricity transmitted through underground wires at high voltage to a number of transforming centres in the city will be there converted into low pressure electricity before being distributed to private consumers. In the case of the existing Dublin system, which cost originally about £50,000 or £60,000, there was always up to last year a small loss on the year's working, but experience has shown that wherever a municipality went in for an installation on a big scale, costing from £100,000 to £200,000, it was recouped all its expenses, and in addition made a substantial profit which went in relief of local rates.

**Enniskerry.**—Plans have been deposited for the proposed electric railway from Bray to Enniskerry, and also the plans for the extension proposed to be carried out at Bray by the Dublin, Wicklow, and Wexford Railway Company.

**Howth.**—An Inspector of the Local Government Board held an inquiry at Howth regarding the lighting of that town and Sutton. The rateable value of the district was £10,058 and the population about 2,500. Some witnesses favoured oil and some electricity. The initial cost of the latter would be £1,256, and the annual maintenance £300.

**Kingstown.**—Mr. P. C. Cowan, M.I.C.E., of the Local Government Board held an inquiry at Kingstown on the 11th inst., regarding loans of £1,000 for concreting works at Crofton Road, Harbour Road, and Royal Marine Road, and £300 for sewerage works at Eglington Road.

**Limerick.**—An application has been received by the Limerick County Council for an advance of £300, for the purpose of carrying out sanitary works at the institution.

**Nenagh.**—At a meeting of the North Tipperary County Council the hon. secretary of the Irish Financial Reform League advocated the advisability of constructing a light railway from Nenagh to Dromineer. He pointed out that the distance between Nenagh and the Shannon at Dromineer was only six English miles, and that the construction of the proposed tramway meant the opening up of the whole dis-

trict on the opposite side, which practically meant a cheap and beneficial communication between the provinces of Munster and Connaught by means of the County Galway. He also pointed out that the Grand Jury had guaranteed several hundred pounds annually for a similar work, viz., to the Shannon Development Company, and he proposed that a joint committee of that Council should meet the committee already formed in connection with the project with a view to seeing by what means the proposal should be carried out.

**Pembroke.**—The Pembroke Urban District Council, Co. Dublin, received tenders on the 9th inst. for the widening and improving of Ball's Bridge, according to the plans of Messrs. Kaye Parry and Ross, 63 Dawson Street, Dublin. The work must be executed within nine months of date of contract.

**Rathdown.**—It is proposed to spend £2,000 for the drainage of the Rathdown Workhouse, the plans having been prepared by Mr. Kaye Parry, C.E., 63 Dawson Street, Dublin.

**Queenstown.**—At a monthly meeting of the Queenstown Urban Council a report was read from the Waterworks engineers—Messrs. S. A. Kinkley and C. G. Doran—stating the progress that had been made with the works during the past month. The excavation for the foundation of the dam had been proceeded with very satisfactorily, and a tolerably firm rock had in some places been reached. The syphon had worked admirably, and had not only emptied the cutting of some hundreds of tons of water, but had kept it sufficiently dry as to admit of the men working in it without any discomfort. They had been trying to secure a quarry from which to obtain a large supply of stones for the dam, and they had hopes of succeeding, but as the season was not the most suitable for quarrying and carrying large blocks such as would be required, they expected that by the opening of the coming spring to have all matters arranged in such manner as would prevent delay to that portion of the work. The workmen's shelter and shed for serating the cement were nearly finished, as was also a store for such tools and appliances as would be likely to be injured by exposure to the weather. They also stated they would require some sand, the washing of which could be done much more conveniently now than in the dry season, when water would be less plentiful, and would advise the Commissioners further upon the matter in their next report.

## Our London Letter.

**King's College.**—The Chair of Architecture and Building Construction, vacant by the death of Mr. Banister Fletcher, has been filled by the appointment of Mr. R. Elsey Smith, A.R.I.B.A., who, in 1889, won the Institute Medal, and in the following year the Greek travelling Studentship.

The new professor has had considerable experience in work similar to that which he is about to undertake, having, in conjunction with his father, Professor T. Roger Smith, F.R.I.B.A., with whom he is in partnership, conducted the Architectural classes at University College, Gower street.

**The Tate Gallery.**—Sir Henry Tate, the donor of the gallery which bears his name and who has recently died at an advanced age, was one of those self-made men who never sought to disassociate themselves from the source of their wealth by any undue display of the honours bestowed upon them, and his last splendid gift to the nation is only one example of the way in which he used his wealth for the furtherance of art, while his name is also associated with free libraries and other buildings which, were it needed, would form a lasting memorial to his generosity.

**The Paris Exhibition Boycott.**—One of the latest to join in what may result in an almost universal withdrawal

from participation in the above, at any rate by English firms, are the executive of the British Fire Prevention Committee who were arranging for a large exhibit representing some 45 firms.

This is probably due to the general unsatisfactory feeling shown towards this country by France, commencing with the Dreyfus case and culminating in the attack on the Queen by a certain section of the French Press, and is an instance of how political questions may affect commercial interests.

**The R.I.B.A. Examinations.**—Among the names of some ninety successful candidates for the November examinations in the preliminary stage is that of a Baronet, Sir F. C. R. Ford, probably the first instance of the holder of an hereditary title qualifying for a future practical knowledge of the profession; the list does not, however, contain the name of any lady, as did the last, and it is not likely that many of the fairer sex will seriously attempt to enter the ranks as a means of livelihood.

**Strength of Concrete Slabs.**—A useful work has been undertaken by the Northern Architectural Association in conjunction with the local district Master Builders' Association and the Building Trades' Exchange in carrying out independent tests of the comparative breaking strength of concrete slabs with and without the addition of "Expanded Metal."

Twelve slabs were set up on wood centres and brick piers and were calculated within a fraction of the cost per yard either way, the concrete being gauged 5 to 1 for 5 in. slabs and 3 to 1 for 3 in. the cement being of the ordinary gauge of 2,500 meshes per square inch, and the concrete being composed of four of 2 in. gravel, one of sand and one of portland cement for the 5 in. slabs, the others being two of 1 in. gravel to one of sand and one of cement, the latter being procured from a merchant in the ordinary way and leaving no residue through a 50 sieve, and only 2 per cent. through a 70 sieve and only weighing 94 lbs. per struck bushel.

The slabs containing No. 10 metal were 5 in. thick, those without being 8 in. to equal the value of the metal omitted, while those containing No. 8 metal were 3 in. thick, the corresponding ones without metal being 4½ in., all were 4 ft. wide and had 6 in. wall hold, each end only being supported.

In two months' time, the centrings having been removed about 5 weeks before, the slabs were gradually weighted with pig-iron having in the meantime being exposed to a continuous hot sun (middle of July to middle of September), with the results that only two slabs were unbroken, these being 5 in. containing No. 10 metal, one bearing 340 cwt. with ⅛ths deflection, and the other 270 cwt., with a slight deflection, both afterwards going back to nearly their original condition; three slabs broke accidentally while being loaded and the other 5 in. slab broke at 237 cwt. The 8 in. slabs without metal broke at an average of 73 cwt. and the 4½ in. ditto at an average of 14 cwt., while the 3 in. slabs with No. 8 metal broke under an average of 141 cwt. Generally speaking there was only a slight deflection before breaking, and the fractures of the expanded metal were clean and free from crystalline appearance, the strands of steel being forced closer together by the load.

**The Society of Architects.**—At the second ordinary meeting the President, Mr. T. Walter L. Emden, J.P., L.C.C., in his address stated that he held that office for the third year in succession, and drew special attention to the Registration questions and the way in which the Society was extending its operations in this direction by means of provincial meetings, etc., and referred to the necessity for an amendment in the law relating to "Light and Air," and

also criticized the London Government Act as affecting Building operations and the desirability of simplifying and codifying the various Acts of Parliament relating thereto, and of extending the powers of the Building Act Tribunal to deal with cases of light and air, etc. He also referred to the generous support given by members with regard to the recent doubling of the annual subscriptions and concluded with a review of the architecture of the 19th century.

**Illicit Commissions.**—A good deal has been heard lately of firms circularizing Architects with offers of "Commission" as distinguished from "discount" and the Birmingham A.A. have sent a copy of one of these circulars to the local press in order to assist in stamping out the practice by calling the attention of the building public to the matter, but the real remedy lies with the Architects themselves who, by refusing to have anything to do with firms of this kind, can soon convince them that such methods are not only unfair but unbusinesslike.

**Coal Smoke Abatement.**—Though only 12 months have elapsed since Sir W. B. Richmond founded his Society it has already well justified its existence, and with only one inspector has made something like 1,000 observations leading to the reporting of over 500 cases and resulting in proceedings being taken in 60 cases with very good effect, and it is satisfactory to learn that its appeal for subscribers to enable it to extend its operations has met with a generous response and it seems likely that the Society has a useful and practical career before it.



## A.A.I. JOTTINGS.

The paper read by Mr. H. Norman Leask on Tuesday, Dec. 5th, was the most important event in our doings of the past fortnight which I have to chronicle. Those members who were unable to be present have lost many practical hints on the treatment of unstable foundations. The paper was bright, and full of interest and instruction, though some portions of it were unlikely to be of use to architects at home, where the erection of skyscrapers is not permitted. They served a purpose, however, in showing that our lines are cast in pleasant places as compared with those of our American cousins, who have to be engineers as well as architects, in order to grapple with the difficult problems which are set for them. It is to be hoped that Mr. Leask will find time to prepare another paper, on some future occasion, for our benefit.

On the lecturer's suggestion a visit is being arranged to Messrs. Paul and Vincent's works on Sir John Rogerson's Quay, where some American methods of grille construction have been successfully executed in the foundations by means of some disused D.U.T. Co.'s rails.

The meeting of the Construction Class fixed for Nov. 23rd, resulted in a lamentable fiasco. Some eight or ten

members waited for over an hour for Mr. M'Gloughlin, the visitor for the evening. They had, however, to go away disappointed, as he did not put in an appearance. Apart from the check the enthusiasm of a class receives from the occurrence of such an event, it is only fair to the Class Secretary, and to those members who come some distance to receive instruction, that they should receive some notification from a visitor of his inability to attend.

A preliminary meeting of the Design Club was held on Monday, Dec. 4th, at 22 Clare Street. Mr. T. E. Hudman was voted to the chair, and as with characteristic energy, Mr. Bradbury, the hon. Class Secretary, had rules ready to submit to the meeting, much business was accomplished in a very short time. It now only rests with the Committee to pass the rules, and with the members eligible for election to come forward in large numbers, to ensure a successful session for the Club.

Four new members were elected at the meeting on Nov. 21st—Messrs. C. B. Powell, H. J. Lyons, H. G. Leask, and T. L. Cullimore. The latter gentleman makes the eighth addition to our numbers this session.

There was a slight error in the Junior Class of Design Notice in the last issue. The visitor on Dec. 14th—the subject being "Domestic Details"—is Mr. R. M. Butler, not F. G. Hicks, as printed.

### Dates for A.A.I. Members.

#### ORDINARY MEETING—

Tuesday, Dec. 19th, Grosvenor Hotel, 8 p.m.

"Modern Domestic Interiors."—R. C. Orpen.

Illustrated by sketches and drawings.

#### CONSTRUCTION CLASS—

Thursday, Dec. 21st, 22 Clare Street, 8 p.m.—

"Concrete." T. E. Hudman. Criticism of drawings.  
"OCULUS."

## Institution of Civil Engineers, Ireland.

At the Annual General Meeting of the Institution of Civil Engineers of Ireland, held at 35 Dawson Street, on Wednesday evening, the 6th inst., the following were elected as officers and council for 1900:—President, Edward Glover; vice-presidents, William Purcell O'Neill, John Henry Ryan. Council—William Anderson, Robert Cochran, Joseph H. Moore, William M. Murphy, George M. Ross, William Ross, Samuel J. Shannon, Prosser A. H. Shaw. Hon. secretary, Marmaduke Backhouse.

**Magowney, Co. Cork.**—A very ornate Communal Table, has been recently placed in this Church, in memory of a departed and greatly esteemed county magnate. It is of sturdily grown British oak. The richly carved front relieves the necessity of any moveable frontal, save on special functions. The flanking and central uprights are panelled, and the upper part of fronts and sides are richly carved emblematic of the Sacrament, with the foliage of the fruitful vine. It has a super-table, whose front is lightened by quatrefoiled panels ornamented by carved paterae. Along the lower member of the bottom-plinth, is a narrow strip of "latten," the old alloy of which ancient brasses were made. Thereupon, in small and unobtrusive characters that those who care to know what is thereupon, may read, occurs the following legend:—"To the glory of God, and sacred to the memory of Warren Gillman Croke, J.P. of Oldtown, who departed this life the 22nd of March, 1898. Presented by his loving wife and Son." This costly gift to the Rev. Richard Hayes, M. A.'s Church, has been carried out by Messrs. Harry Hems and Sons, Church Sculptors, of Exeter.

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## ANNALS OF MONKSTOWN

AND

SOME NEIGHBOURING PARISHES IN THE  
COUNTY OF DUBLIN.

BY FRANCIS ELRINGTON BALL, M.R.I.A., F.R.S.A.I.

## CHAPTER V.—Continued.

1500—1600.

1579.—James Eustace, who had now succeeded to the Baltinglass titles, as the 3rd Viscount, joined the Earl of Desmond in his Rebellion, and meetings between him and the other confederates, amongst whom were Lord Delvin, his brother William Nugent, and Oliver Eustace, took place at Monkstown Castle. *Calendar of State Papers, Ireland.*

1580.—The Earl of Kildare, a kinsman of Viscount Baltinglass, sought to obtain from the Crown the custody of Monkstown Castle. *Calendar of State Papers, Ireland.* He was charged with aiding the Viscount during his Rebellion, and with refusing to execute a warrant for his apprehension. It was alleged that the Earl could easily have found out from the Viscount's wife when he was likely to be at Monkstown, and could have there arrested him, but that instead he sent messages through the Viscountess and the Viscount's sister (Joan, wife of Barnaby Fitzpatrick, 2nd Baron of Upper Ossory), "rather to hasten the Viscount away for fear of apprehension, than to persuade him to come in." *Calendar of Carew State Papers, 1575-88, p. 318.*

1581.—An inquisition of this year states that Richard Luttrell, "long before attainted," and James Eustace, late Viscount of Baltinglass, were seized of Monkstown and Cornelscourt, that in 1560-61 the lands were demised to Thomas Cruise, James Goodman of Loughlinstown, William Sutton of Tipper, Patrick Cheevers of Macetown, John Barnewall of Harristown, and Alexander Eustace of Cradockstown, as trustees, who were all dead; that Sir John Travers made his will on October 26, 1561, and afterwards died; and that Viscount Baltinglass was attainted for high treason. It also states that the tithes of Monkstown were let to James Barnewall. *Irish Chancery Inquisition, vol. i. Dub. Eliz. No. 4.*

1581.—Viscount Baltinglass in October or November fled to Spain in a Scotch ship. *Calendar of State Papers, Ireland.*

1582.—Sir Henry Wallop, Vice-Treasurer and Treasurer at War, an ancestor of the Earls of Portsmouth, was given the custody of Monkstown Castle by the Crown, and a number of his letters written in May, June, and July are dated from there. *Ibid.* Sir Henry was buried in St. Patrick's Cathedral, where a brass to his memory is still to be seen. *Leeper's Handbook of St. Patrick's, p. 81.*

1583.—Mary, wife of "the late Viscount Baltinglass attainted," was granted Monkstown, Newtown, and Cornelscourt, "being part of the lands which the Viscount held in right of his wife." *Fiant Elizabeth, No. 4134.* Wallop, in a letter to Walsingham, urged the impolicy of restoring her lands to "the Lady of Baltinglass." *Calendar of State Papers, Ireland.*

1584.—Theobald Walsh, of Carrickmines, was appointed a Commissioner to take the muster of the Co. Dublin. *Fiant Elizabeth, No. 4462.*

1584.—Piers, son of Richard Archbold, of Kilmacud, gent., was granted a pardon on his giving security to keep the peace. *Ibid, No. 4405.*

1584.—Sir John Perrott, Lord Deputy of Ireland, arrived at "the haven of Dalkey" on June 9, about 6 o'clock in the afternoon. *Liber Munerum.*

1585.—James Wolverston, of Leperstown, was granted a pardon on his giving security to keep the peace. *Fiant Elizabeth, No. 4796.*

1583.—James Eustace, 3rd Viscount Baltinglass, died on November 25th in Spain. *Calendar of State Papers, Ireland.* His widow married as her second husband, Gerald Aylmer, of Donadea, in the County Kildare, who was afterwards knighted, and, under James I., was made one of the first baronets.

1586.—George Wolverston, of Stillorgan, was included in a list of pensioners. *Calendar of State Papers, Ireland.*

1586.—A commission was issued to the Bishop of Kildare and others to hear an appeal from the Vicar-General of Dublin in a case concerning the will of James Goodman, of Loughlinstown, between Richard Goodman and John Walsh, of Shanganagh. *Fiant Elizabeth, No. 4820.*

1586.—The Dean and Chapter of Holy Trinity leased to James Garvey, gent., the lands of Killiney at a rent of 26s. 8d. *Christ Church Deed, No. 1375.*

1586.—The Dean and Chapter of Holy Trinity leased to David Lara, of Kill of the Grange, yeoman, a house and garden with land called Sir John Callan's lands, the two stony acres "by easte the Church," the two acres of the Roman well and the meadow by "the Carricke." *Ibid. No. 1376.*

1586.—The Dean and Chapter of Holy Trinity leased to John Dungan, second Remembrancer of the Exchequer, a moiety of "a messuage, castle, orchard and land," at Dalkey. *Ibid. No. 1374.* John Dungan died on August 8, 1592, leaving by his wife, Margaret Foster, four sons—Walter, to Castletown, in the Co. Kildare, who was created a baronet, and whose grandson was raised to the peerage as Viscount Dungan, and Earl of Limerick, and attainted in 1691; William, who was Recorder of Dublin; Edward, of Kiltaghan; and Thomas, of Greffenrath. See Burke's *Extinct Peerage and Irish Builder* for 1899, p. 95.

1587.—The Dean and Chapter of Holy Trinity granted to Sir Morgan Byrne, chaplain, the cures of Killiney and Dalkey "with the manse, glebe lands, and fishings." *Christ Church Deed, No. 1378.*

1587.—The Dean and Chapter of Holy Trinity, on the surrender of leases to Anne Hocknell and John Brady, and in consideration of 100 crannocks of lime to rebuild the church steeple, leased to Alderman Richard Fagan, of Dublin, the tithes of Dalkey and Brennanstown. *Ibid No. 1377.*

1587.—Jacques Wingfield, of Stillorgan, died on or about August 31st, in the parish of St. Giles in the Fields London, leaving all he possessed to his son Thomas Archdall's edition of *Lodge's Peerage of Ireland, vol. v. p. 267.* He was then very old, and had been absent from Ireland for five years. The state of his department occasioned frequent complaints, but he had powerful friends, including the great Lord Burghley, who protected him. *Calendar of State Papers, Ireland, and Bagwell's Ireland under the Tudor's passion.*

1588.—George Wolverston, of Stillorgan, made towards the end of April his nuncupative will, by which he left his goods and chattels to his grand-child William, the eldest son of James Wolverston, of Leperstown, in presence of George Wolverston, William Rochfort, and others. *Dublin Consistorial Will.* He married Femold, daughter of Nicholas Rochfort. *Funeral Entry in Ulster's Office.*

1589.—A lease of the church and tithes of Stillorgan, and a lease of its manor, was seized, amongst other property belonging to Jacques Wingfield, by the Crown. *Calendar of State Papers, Ireland.*

1590.—Sir R. Bingham sent a letter to the Lord Deputy by Lieutenant Wolverston, on behalf of whom Sir Geoffrey Fenton wrote two years later to Lord Burleigh, saying that Wolverston's horse had been slain under him, and that he had seen seventeen years' service. *Ibid.*

1590.—The Dean and Chapter of Holy Trinity leased to Alson and Katherine Ussher, of Dublin, the premises at Stillorgan, and the tithes, which had been leased to Wingfield. *Christ Church Deed*, No. 1390. These ladies were sisters of Archbishop Henry Ussher. See Ball Wright's *Memoirs of the Ussher Families*, p. 41.

1591.—Gerald Aylmer, of Monkstown, was ordered to hear a sermon preached by Archbishop Loftus, but avoided doing so by leaving for London. On his arrival there, he was thrown into prison. It was reported to Lord Burghley that although the Queen had conferred great honours on Aylmer he had never once said "amen" when Her Majesty was prayed for. *Calendar of State Papers, Ireland*.

1592.—The lands of Murphys town were leased by the Cathedral of the Holy Trinity to Walter Harrold, of Dublin. *Christ Church Deed*, No. 1402. See Paper on Murphys town in the *Irish Builder* of March 1, 1898.

1592.—The farm of Clonkeen, commonly called the Kill, a house being reserved for the Curate, was leased by the Cathedral of the Holy Trinity to George Ussher, of Dublin. *Christ Church Deed*, No. 1406.

1592.—Richard Plunkett and others conveyed to Christopher Plunkett and others, the manor, castle, and lands of Stillorgan, to hold in trust for Richard and his wife Anne. Morrin's *Calendar of Irish Patent and Close Rolls*.

1594.—The lands of Ballyogan, Tipperstown, alias Waltersland, and "the More of Leperstown," were leased by the Cathedral of the Holy Trinity to Walter Harrold. *Christ Church Deed*, No 1410.

1594.—The tithes of Laughanstown, Kilboggett, and Kilmacud, were leased to Alderman Gerald Young. *Ibid.* No. 1416.

1595.—Peter Barnewall, of "Lespopell," gent., was appointed guardian of the person and lands of Richard, son and heir of Theobald Walsh, late of Carrickmines, during his minority. *Fiant Elizabeth*, No. 5966.

1595.—John Cheevers, who had married the younger daughter of Henry Travers, died. *Prerogation Will*.

1595.—Kill Abbey House, near the ruined church of Kill of the Grange, bears this date, and was then probably built.

1597.—A pardon was granted to inhabitants of Cornels-court, including Thomas Kean, alias Cahell, a priest. *Fiant Elizabeth*, No. 6200.

1597.—Alderman William Gough obtained a lease of Leperstown from the Corporation of Dublin, and S. Launcelot Money custos of St. Stephens. Gilbert's *Ancient Records of Dublin*, vol. ii., p. 308.

1598.—Monkstown is mentioned as one of the principal castles of the Co. Dublin, and Sir Gerald Aylmer of Monkstown, Walsh of Carrickmines, Goodman of Loughlinstown, Morgan of Dalkey, Dungan, of Dalkey, and Wolverston of Stillorgan, as "men of note." Dalkey is described, amongst the harbours of Ireland, as a wild road. *Description of Ireland in 1598*, edited by Rev. Edward Hogan, Dublin, 1778, p. 37.

1599.—Robert, Earl of Essex, landed at Dalkey on April 15th, on his arrival as Lord Lieutenant. He was accompanied by a strong force to proceed against Hugh O'Neil, Earl of Tyrone. Gaskin's *Irish Varieties*, p. 16.

(Conclusion of the first part of the Annals).

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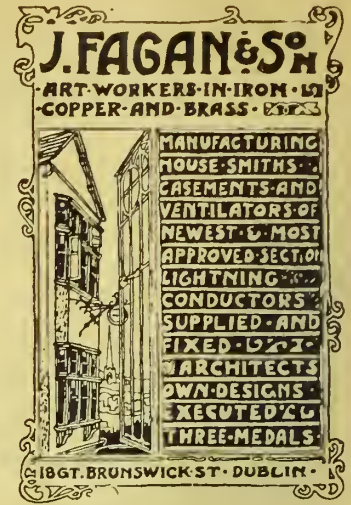
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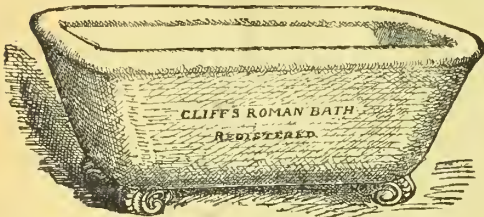


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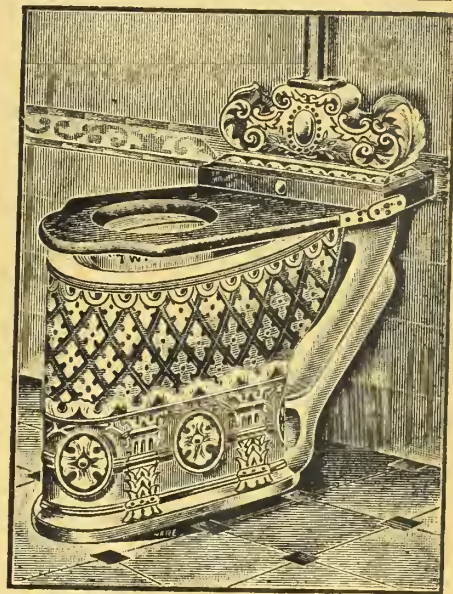
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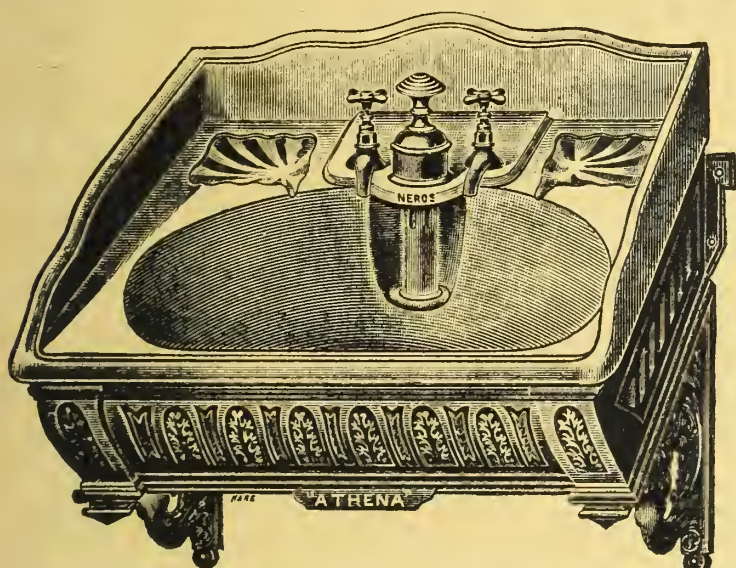
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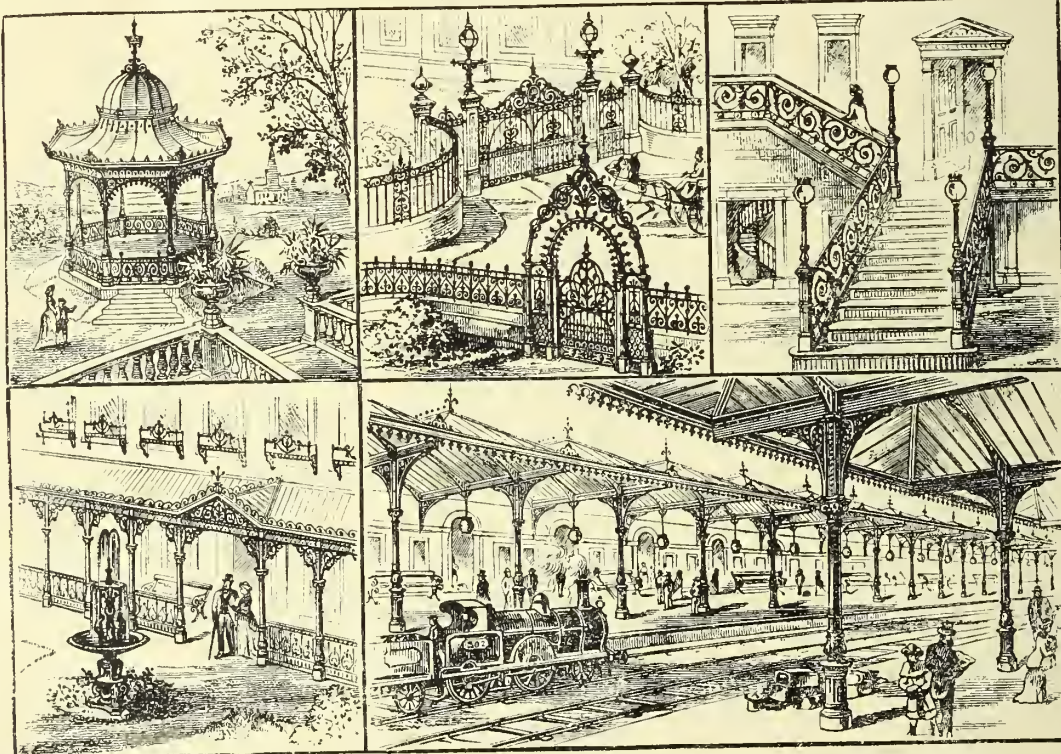
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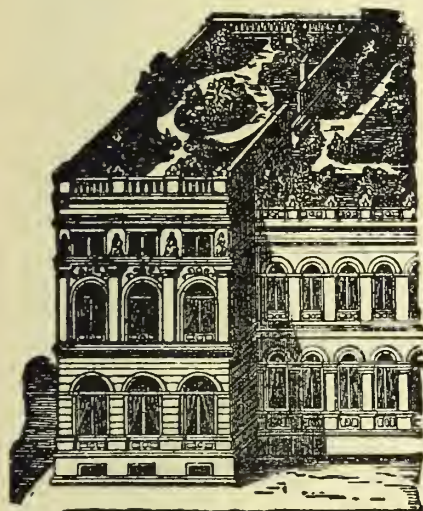
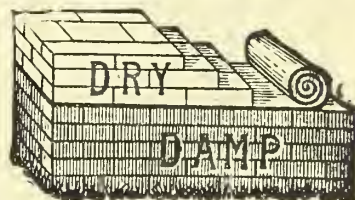
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**St. John's Schools, Banbury,** are being warmed and ventilated by means of Shorland's patent Manchester Grates, patent Exhaust Roof Ventilators and special Inlet Tubes, the same being supplied by Messrs. E. H. Shorland and Brother, of Manchester.

**Barnsley.**—(New Public Clock).—A new Public clock has been given to the inhabitants of Barnsley by the Mayor. The Clock shows the time upon one large illuminated dial and strikes the hours on a Bell also presented by the Mayor and fixed in the Wesleyan Chapel, Barnsley, the work having been executed by Messrs. W. Potts and Sons, Clock Manufacturers, of Leeds and Newcastle-on-Tyne. Messrs. Potts and Sons are also going to erect a new Public Clock and Bell at the Municipal Buildings, Darwen, Lancashire, which is being presented by Dr. Ballantyne.

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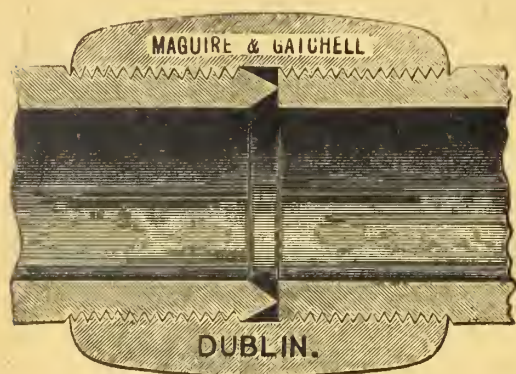
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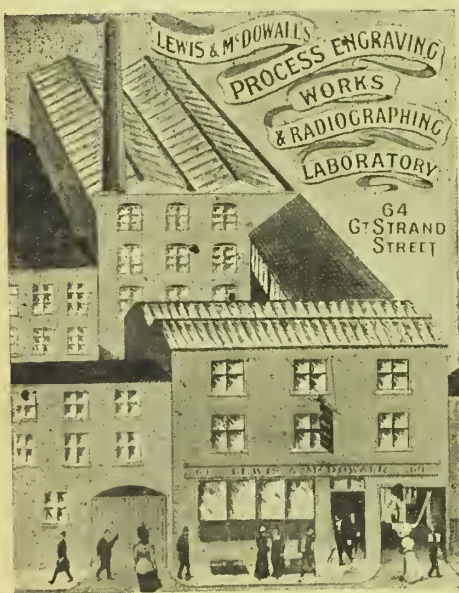


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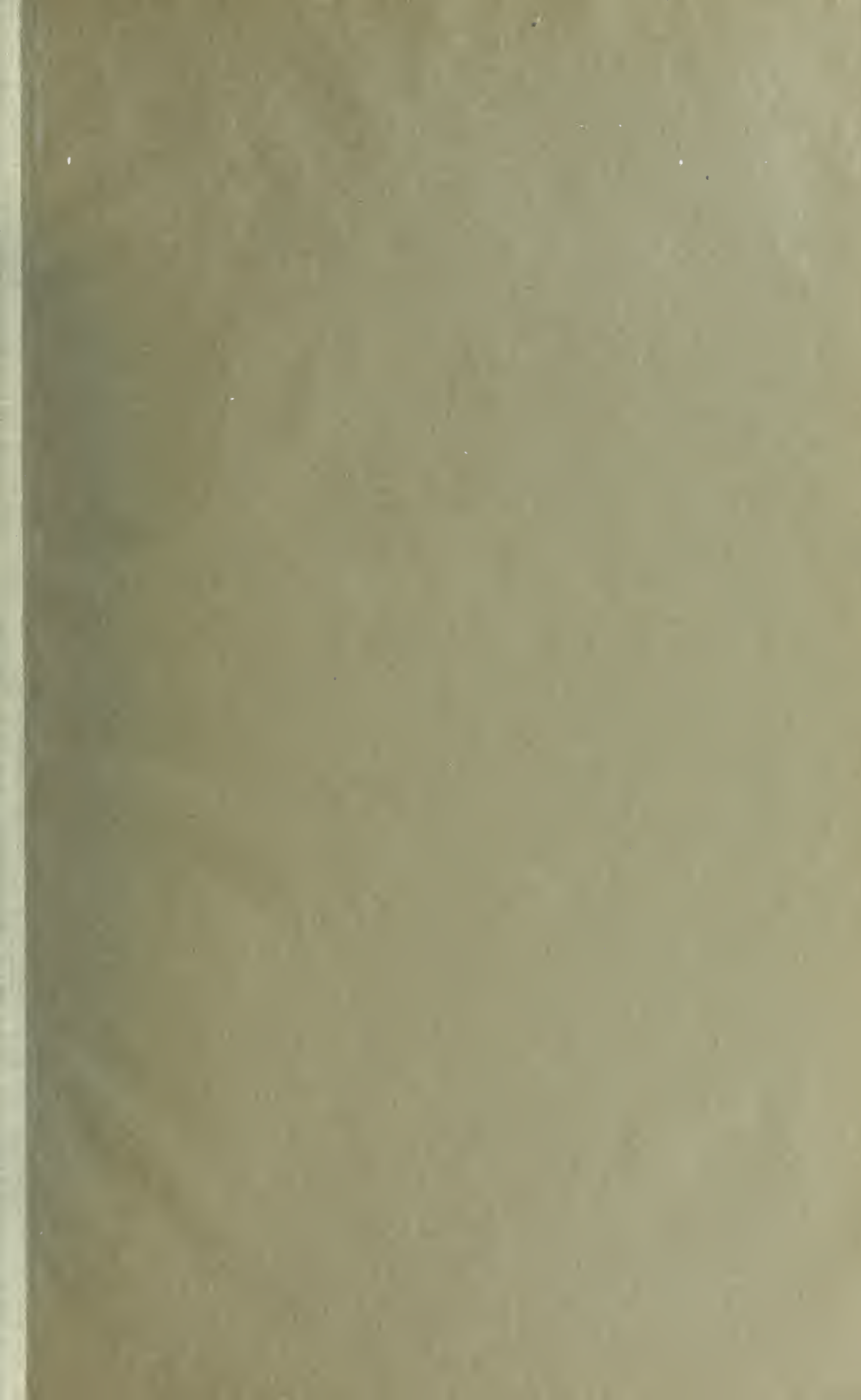
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